Railway Recruitment Board

RRB NTPC Non Technical Popular Categories CBT Stage-I & II MATHEMATICS Sampoorna Chapter-wise Solved Papers

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Trend Analysis of RRB NTPC Previous Year Exams Papers Through Pie Chart and Bar Graph

S.No.	Exam Paper	Exam Date/Year	Ques. No.
1.	NTPC Stage - II	2022	$15 \times 120 = 1800$
2.	NTPC Stage - I (Graduate Level & Non-Graduate Level)	2019	$133 \times 100 = 13300$
3.	NTPC Stage - II	2017	9×120 = 1080
4.	NTPC Stage - I (Graduate Level & Non-Graduate Level)	2016	$64 \times 100 = 6400$
			Total = 22580





Type-1	(d) 35 552
	552 (0 (6 1 1 1 1 1 1 1))
Problems Based on Divisibility	
1. Which of the following numbers is divisible	Hence, option (c) is not divisible by 8.
completely by both 9 and 11 ? (a) 277218 (b) 10008	4. If the 7 digit number 504x5y3 is divisible by 11,
$\begin{array}{cccc} (a) & 2/7218 \\ (b) & 10098 \\ (c) & 12245 \\ (d) & 181008 \\ \end{array}$	then one of the values of the sum of x and y is:
(c) 12343 (d) 181998 DDB NTPC (Stage II) $17/06/2022$ (Shift II)	(a) 11 (b) 5
Ang. (b) \cdot Divisibility rule of 0	(c) 17 (d) 7
Alls. (b) : Divisibility full of $9 -$ When the sum of the digits of a number is divisible by 9	RRB NTPC (Stage-II) –13/06/2022 (Shift-II)
then the number is also divisible by 9	Ans. (c) : Given, 504x5y3
Divisibility rule of 11 -	Divisibility rule of 11:- If the difference of the sum of
When the difference between the sum of the digit in	digits at even place and at odd place is zero or divisible by 11 then the given number will be divisible by 11
even and odd place of a number is 0 (zero) or a multiple	504x5x3
of 11, then the number will also be divisible by 11.	(0 + x + y) - (5 + 4 + 5 + 3) = 0 or multiple of 11
From option (b),	$(3 + x + y)^{-1} (3 + 1 + 3 + 3)^{-1} = 0$
1 + 0 + 0 + 9 + 8 = 18	x + y = 17
i.e. 18 is divisible by 9	Hence, Sum of x and y is 17
And	5. If 11-digit number 88p554085k6, $k \neq p$, is
10098 = (9+0) - (8+0+1) = 9-9 = 0	divisible by 72, then what is the value of $(3k +$
Hence option (b) 10098, is divisible by both 9 and 11.	2p)?
2. Which of the following numbers is NOT	(a) 12 (b) 7
(a) 49104 (b) 77832	(c) 13 (d) 23
$\begin{array}{c} (a) & 45104 \\ (b) & 4532 \\ (c) & 35253 \\ (d) & 45390 \\ \end{array}$	RRB N I PC (Stage-II) –13/06/2022 (Shift-II)
RRB NTPC (Stage-II) –12/06/2022 (Shift-II)	Ans. (c): Given, 00.55400516
Ans. (d) : Divisibility rule of 9 · A number whose sum	88p554085K6 where, $K \neq p$
of its digit is exactly divisible by 9 then the number is	divisible by 8 and 9
always divisible by 9.	Divisibility rule of 8– If the last three digit of the
from options -	number are divisible by 8, then the number will be
(a) $49104 \rightarrow 4 + 9 + 1 + 0 + 4 = 18$, divisible by 9.	divisible by 8.
(b) $77832 \rightarrow 7 + 7 + 8 + 3 + 2 = 27$, divisible by 9.	Divisibility rule of 9– If the sum of the all digits of a
(c) $35253 \rightarrow 3 + 5 + 2 + 5 + 3 = 18$, divisible by 9.	given number is divisible by 9, then number will be
(d) $45390 \rightarrow 4 + 5 + 3 + 9 + 0 = 21$, not divisible by 9.	divisible by 9. In the given number 88p554085k6
3. Which of the following number is NOT	On nutting $k = 3$
divisible by 8?	526
(a) $35/92$ (b) 35112 (c) 25412 (d) 25552	$\frac{350}{2} = 67$ (Completely divisible by 8)
(c) 33412 (d) 33532	8
Ang. (a) + Divisibility rule of 8. If the last three digits of	and On putting $p = 2$
a number are divisible by 8 then the number is also	8+8+2+5+5+4+0+8+5+3+6
completely divisible by 8.	9
From the given options -	$=\frac{54}{-6}$ (Completely divisible)
(a) 35 <u>792</u>	9^{-0} (completely divisible)
792 00 (Completely divisible)	Then, $(3k+2p)$
	$= 3 \times 3 + 2 \times 2$
(b) 35 <u>112</u>	= 13
112 14 (0 1 (1 1 1 1 1 1)	6. When a number n is divided by 5, the
$\frac{14}{8}$ = 14 (Completely divisible)	remainder is 2. when n ⁻ is divided by 5, the
(c) $35 \underline{412}$	(a) 3 (b) 1
412 515 614 141 141	(c) 4 (d) 0
$\frac{1}{8}$ = 51.5 (Not completely divisible)	RRB NTPC 07.01.2021 (Shift-I) Stage Ist
U	

Which of the following is the greatest three 11. **Ans. (c) :** Number = Divisor × Quotient + Remainder digit number that is divisible by 13? According to question, (a) 990 (b) 575 $n = 5 \times q + 2$ (d) 908 (c) 988 On squaring both the sides, RRB NTPC 18.01.2021 (Shift-II) Stage Ist $n^2 = 25q^2 + 4 + 20q$ **Ans. (c) :** Greatest three digit number = 999 On dividing by 5 – On dividing by $13 = \frac{999}{13} = 76\frac{11}{13}$ $\frac{n^2}{5} = 5q^2 + \frac{4}{5} + 4q$: 999 divided by 13 leaves remainder 11. Hence, required remainder will be 4. \therefore The greatest three digit number divisible by 13 = 999How many numbers of the first 100 positive 7. -11 = 988integers are divisible by 3 or 4 without a 12. The number 93248x6 is divisible by 11. Then remainder? digit x is equal to. (a) 50 (b) 5 (a) 5 (c) 8 (b) 2 (d) 7 (c) 58 (d) 85 RRB NTPC 03.02.2021 (Shift-I) Stage Ist RRB NTPC 08.02.2021 (Shift-II) Stage Ist Ans. (d) : Divisibility rule of 11–In a given number if Ans. (a) : Total number of positive integers which is the difference of sum of digits at even place and at odd place is zero or multiple of 11, then that number will divisible by $3 = \frac{100}{3} = 33$ also be divisible by 11. (9+2+8+6)-(3+4+x)Total number of positive integers which is divisible by 25 - (7 + x) = 11 $4 = \frac{100}{4} = 25$ 18 - x = 11x = 18 - 11Total number of positive integers which is divisible by Hence, x = 7 $(41^{43} + 43^{43})$ is divisible by: $12 = \frac{100}{12} = 8$ 13. (a) 86 (b) 74 (c) 12 (d) 84 RRB NTPC 25.01.2021 (Shift-II) Stage Ist Hence, the total number of positive integers which is Ans. (d): $(x^{n} + a^{n})$ is divisible by (x + a), if the value divisible by 3 or 4. =(33+25-8)of n is odd : 43 is a odd number, therefore $(41^{43} + 43^{43})$ will be = 50divisible by 41 + 43 = 84How many numbers between 1 and 700 are 8 If pq is a two-digit number, then pq – qp will 14. completely divisible by 17? be completely divisible by: (a) 42 (b) 41 (b) 7 (a) 9 (c) 45 (d) 46 (d) 5 (c) 6 RRB NTPC 29.01.2021 (Shift-II) Stage Ist RRB NTPC 07.04.2021 (Shift-II) Stage Ist Ans. (b) : Numbers between 1 and 700 which are Ans. (a) : Let the two digit number (pq) = 10x + yexactly divisible by 17. Then, qp = 10y + xAccording to the question, $l = a + (n-1) \times d$ pq – qp $697 = 17 + (n-1) \times 17$ = 10x + y - (10y + x)= 10x + y - 10y - x $680 = (n-1) \times 17$ 40 = n - 1=9x-9yn = 41= 9 (x - y)Hence, required number (n) = 41Hence pq – qp will be completely divisible by 9. What is the total number of odd and even 9 15. If n is a natural number then n³-n is always divisors of 120, respectively? divisible by..... (b) 16.0 (a) 12,4 (b) 6 (a) 8 (c) 4,12(d) 8.8 (c) 5 (d) 4 RRB NTPC 01.02.2021 (Shift-II) Stage I RRB NTPC 05.04.2021 (Shift-II) Stage Ist Ans. (c) : Divisors of 120-**Ans. (b)**: \therefore n is a natural number. 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24 $\therefore n^3 - n = n(n^2 - 1) = n(n+1)(n-1)$ 30, 40, 60, 120 n(n+1) (n-1) {Multiplication of three consecutive Number of even divisors -12, natural numbers} Number of odd divisors – 4 On putting the value of n = 2When 19³⁰⁰ is divided by 10. 20, find the $n^{3} - n = n(n + 1)(n - 1) = 2 \times 3 \times 1 = 6$ remainder. again put the value of n = 3(b) 1 (a) 2 (c) 3 (d) 4 $n^3 - n = 3 \times 4 \times 2 = 24$ RRB NTPC 29.01.2021 (Shift-II) Stage Ist .: The product of any three consecutive number will Ans. (b) : From question, always be divisible by both 2 and 3, which then means $\frac{19^{300}}{20} \Rightarrow \frac{(20-1)^{300}}{20} \Rightarrow 0 + (-1)^{300} = 1$ (Remainder) that, it will also always be divisible by 6. Note- The multiplication of three consecutive natural numbers will be always divisible by 6.

16. If a positive number N, when divided by 5 leaves a remainder 3 then the unit's place digit	Ans. (d) : According to the question, Numbers between 300 and 1000 are divisible by 7
of N is?	301, 308, 315,
(a) $0 \text{ or } 5$ (b) $0 \text{ or } 2$	l = a + (n - 1)d
(c) $3 \text{ or } 8$ (d) $1 \text{ or } 5$	\Rightarrow 994 = 301 + (n - 1) × 7
RRB NTPC 25.01.2021 (Shift-I) Stage Ist	\rightarrow 994-301 (m 1)
Ans. (c) : Required positive number	$\Rightarrow \frac{1}{7} = (n-1)$
= 5K+3(K=0.1.2)	\Rightarrow n - 1 = 99
$5 \times 0 + 2 = 2 \times (0 - 10^{-10} \text{ K}^{-1})$	\Rightarrow n = 100
$= 5 \times 0 + 3 = 3$ (On putting $K = 0$)	Hence required answer is 100.
$= 5 \times 1+5 = 8$ (On putting K = 1) = 5 × 60 + 2 = 202 (On putting k = 60)	21. Find the greatest number of five digits, which is
$-5 \times 60 + 5 - 505$ (On putting k = 61)	exactly divisible by 468.
$-5 \times 01 + 5 - 508$ (On putting $k - 01$) Hence, unit digit of $N = 3$ or 8	$\begin{array}{c} (a) & 99064 \\ (c) & 99864 \\ (d) & 99468 \\ \end{array}$
17 A number when divided by 7 leaves a	RRB NTPC 04.01.2021 (Shift-II) Stage Ist
17. A number when under by 7 leaves a remainder 4 What will be the remainder when	Ans. (a) : The greatest number of five digits = 99999
the square of the same number is divided by 7?	
(a) 2 (b) 4	468)99999(213
(c) 1 (d) 3	<u>936</u>
RRB NTPC 29.01.2021 (Shift-I) Stage Ist	639
Ans. (a): Let. Ouotient = n	468
Number = Divisor \times Ouotient + Remainder	1719
Number = $7 \times n + 4$ (Given. Remainder = 4)	1404
On putting $n = 1$,	
Number = $7 \times 1 + 4 = 11$	Required number $^{-5}$ = 99999 - 315 = 99684
On dividing the number by 7,	22. In between 250 – 1000, how many numbers are
Remainder = 4	completely divisible by 5, 6 & 7.
Hence, on dividing the square of 11 by 7	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$(11)^2$ 121	Ans (d) \cdot I CM of 5 6 7 –
Remainder = $\frac{7}{7} = \frac{7}{7} = 2$	Ans. (u) : Let $015, 0, 7 =$
18. The smallest positive number which must be	2 5,6,7
added to the greatest number of 4 digits in	3 5,3,7
order that the sum may be exactly divisible by	5 5.1.7
307 is:	$\frac{7}{7}$ 117
(a) 307 (b) 132 (c) 306 (d) 176	
RRB NTPC 17.01.2021 (Shift-II) Stage Ist	1, 1, 1
Ans. (b) : The greatest number of 4 digits = 9999	\sim Numbers from 250 to 1000 which are divisible by 5
307)9999(32	6, 7 will be always divisible by 210 or in multiples of
-921	210.
720	Therefore, the numbers are 210×1 , 210×2 , 210×3 ,
/ 67	$210 \times 4, 210 \times 5$ 210 420 630 840
<u>614</u>	Hence, the required numbers $= 3$
175	23. The largest four-digit number that is exactly
Hence, the smallest number to be added = $307-175$	divisible by 83 is:
= 132	(a) 9936 (b) 9954
19. How many numbers from 3 to 60 are odd	(c) 9960 (d) 9966 DDD NTDC 20 01 2021 (Shift I) Stars Let
numbers that are exactly divisible by 5?	KKB NIPC 20.01.2021 (Sinit-1) Stage 1st Ang. (a) - The largest four digit number $= 0.000$
(a) 7 (b) 5 (c) 8 (d) 6 (d) $\frac{1}{2}$	Ans. (c): The largest four-digit number – 9999
RRB NTPC 09.01.2021 (Shift-1) Stage 1st	83)9999(12
Ans. (d) : Odd numbers between 3 to 60 which are	83
alvisible by 5.	1(0
5, 15, 25, 55, 45, 55 So total number of odd numbers from 3 to 60 which are	169
exactly divisible by $5 = 6$	166
20 How many numbers between 300 and 1000 are	39
divisible by 7?	Therefore required number = $9999 - 39 = 9960$
(a) 994 (b) 301 (c) 101 (d) 100	Hence, 9960 is the largest four-digit number which is
RRB NTPC 09.01.2021 (Shift-I) Stage Ist	exactly divisible by 83.

24. $(47)^{25} - 1$ is exactly divisible by:	Ans. (a) : Required number = LCM of 2, 3, 4, 5, 6, 7,
(a) 21 (b) 24	8, 9, 10
(c) 23 (d) 19	$= 2, 3, (2 \times 2), 5, (2 \times 3), 7, (2 \times 2 \times 2), (3 \times 3) \times (2 \times 5)$
RRB NTPC 18.01.2021 (Shift-I) Stage Ist	$= 2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 7 = 2520$
Ans. (c) : $(47)^{25} - 1$	28. How many numbers greater than 2 and less
$a^n - b^n$ is completely divisible by $(a - b)$	than 30 are divisible by 1 and themselves
When $n = odd$ numbers,	(a) 9 (b) 29 (c) 27 (b) 11
As per the question	(c) 27 (d) 11
n = 25(Odd number)	RRB NTPC 10.01.2021 (Shift-1) Stage 1st
a = 47, b = 1	Ans. (a) : Prime number-The numbers which is only
Then,	divisible by I and itself are known as prime number.
$a - b = 47 - 1 = 46 = 2 \times 23$	The prime numbers greater than 2 and less than 30 are -2.5 , 7.11 , 12.17 , 10.22 , 20 $-$ Total 0 symptoms
Hence, $47^{25} - 1$ is divisible by 23.	= 3, 5, 7, 11, 13, 17, 19, 23, 29 = 1 otal 9 numbers
25. If 111 1 (n digits) is divisible by 9, then the	Hence, the required number = 9
least value of n is:	29. $3^{1}+3^{2}+3^{3}+3^{3}+3^{3}$ is divisible by:
(a) 18 (b) 12	(a) 8 (b) 5 (c) $\frac{11}{2}$
(c) 3 (d) 9	(c) 11 (d) 7
RRB NTPC 18.01.2021 (Shift-I) Stage Ist	RRB NTPC 08.01.2021 (Shift-II) Stage 1st
Ans. (d) : When the sum of all the digits of a number is	Ans. (c) : $3^{71} + 3^{72} + 3^{73} + 3^{74} + 3^{75}$
divisible by 9, then number will be divisible by 9.	$= 3^{71}(3^0 + 3^1 + 3^2 + 3^3 + 3^4)$
Given number-	
• 1111 (n digits)	$= 3^{71} \left(1 + 3 + 9 + 27 + 81 \right)$
• When n = 1, number is 1, which is not divisible by 9.	$-3^{71} \times 121$
• When n = 2, number is 11, which is a prime number	-5^{71} 112
and thus not divisible by 9.	$=3^{11} \times 11^{2}$
• When $n = 3$, number is 111 and $1+1+1=3$, which is	Hence, given series will be divisible by 11.
not divisible by 9.	30. The smallest 5 digit number that leaves a
	remainder of 6 when divided by 7 is :
	(a) 10009 (b) 10002
	(c) 10003 (d) 10007
• When $n = 9$, number is 111111111 and $1+1+1+1+1+1$	RRB NTPC 28.12.2020 (Shift-I) Stage 1st
1+1+1=9, which is divisible by 9	Ans. (b) : Smallest number of 5 digits =10000
Hence, the least possible value of n is 9.	10000
26. A number when divided by 280 leaves 73 as the	7 $\int_{\text{Remainder}=4}$
remainder. when the same number is divided	Required number = $10000 + (6 - 4) = 10002$
by 35, the remainder will be: (a) 4 (b) 2	31. N is a whole number which when, divided by 6
(a) 4 (b) 2 (c) 3 (d) 7	leaves the remainder 4. Find the remainder
(C) S (U) 7 RRR NTPC 16 01 2021 (Shift_I) Stage Ist	when 2N is divided by 6.
$\mathbf{Ans} (\mathbf{a}) : \mathbf{I} \text{ at number} = \mathbf{N}$	(a) 4 (b) 8
M_{13} . (c) . Let number – N N = 280K + 73	(c) 2 (d) Zero
$= (35 \times 8) K + 70 + 3$	RRB NTPC 28.04.2016 Shift : 1
$= (55 \times 6) \text{ K} + 76 + 5$ = 35 (8K + 2) + 3	Ans : (c) Let the quotient be "a" when N is divided by 6.
$N = 25m \pm 2$ (i) (where $m = 8K \pm 2$)	\therefore N = 6a + 4(i)
N = 25a + r (ii)	By equation (i) ×2,
$\frac{1}{10} = 0.000 + 1(11)$	$2N = 2 \times 6a + 8$
r = 2	2N = 12a + 6 + 2
1 - 3 Hence on dividing the same numbers by 25 the	2N = 6(2a+1) + 2
remainder will be 3	Hence, the required remainder will be 2.
77 The least number that is divisible by all the	32. Find the least 6 digit number that is a multiple
27. The least number that is divisible by all the numbers from 2 to 10 is_	of 18.
(a) 2520 (b) 100	(a) 100000 (b) 999900
$\begin{array}{c} (a) & 2520 \\ (b) & 100 \\ (c) & 504 \\ (d) & 9 \end{array}$	(c) 100008 (d) 100006
RRB NTPC 10 01 2021 (Shift_I) Stage Ist	RRB NTPC 29.04.2016 Shift : 1
1111 - 10.01.2021 (Smit-1) Stage 1st	

Ans: (c) The smallest 6 digit number = 100000	I ype-2
5555	Problems Based on Specificity of Digits
18)100000	36 In a five digit number, the digit in the hundred's
90	nlace is 2 and the digit in the unit's place is twice
100	the digit in the hundred's place. The digit at
00	thousands place is zero. The digit in the ten
90	thousand's place is the sum of the digit in the
100	hundred's place and the digit in the unit's place.
90	The digit in the ten's place is the digit in the ten
100	thousand's place minus 1. The number is:
100	(a) 60234 (b) 60224
90	(c) 60254 (d) 60264
$\overline{10}$	RRB NTPC 09.02.2021 (Shift-I) Stage Ist
The remainder is 10, hence $18 - 10 = 8$ is added to the	Ans. (c): Let us assume the number be abcde
number will make it completely divisible.	As per question
Hence, the required number = $100000 + 8 = 100008$	a = 2
33 What number should be deducted from 1265 to	c = 2 $e = 2 \times c$
make it divisible by 20 evectly?	$e = 2 \times e$
$\begin{array}{c} \text{make it unvisible by 27 exactly:} \\ \text{(a) } 15 \qquad \text{(b) } 16 \qquad \text{(c) } 19 \qquad \text{(d) } 17 \end{array}$	$e = 2 \wedge 2$
$\begin{array}{c} (a) \ 15 \\ (b) \ 10 \\ (c) \ 18 \\ (d) \ 17 \\ (d) $	b = 0
KKB N1PC 05.04.2010 Snift : 3	0 - 0 0 - 2 + 4
Ans : (c) From question,	a-2+4
43	d = 0
29)1265	d = 0 - 1
116	u = 3
	Putting an values, then the required number – 60234
×105	37. What is the smallest four digit number formed
87	by using the digits $3, 5, 0, 6$?
18	(a) 3056 (b) 0356 (c) 0526 (d) 2506 (d)
Hanaa 18 should be subtracted from 1265 to make it	(0) 0000 (0)
nence, 18 should be subtracted from 1205 to make it	RRB NIPC 08.02.2021 (Shift-I) Stage 1st
completely divisible by 29.	Ans. (a) : The smallest four-digit number formed by
34. Find the least number to be added to 1739 so	3,5,0,6 = 3056
that it is exactly divisible by 11.	38. What is the smallest five-digit number formed
(a) 11 (b) 2	by using the digits 2, 3, 4, 0, 5?
(c) 1 (d) 10	(a) 23045 (b) 20435 (c) 20245 (c) 2025 (c) 2
RRB NTPC 30.03.2016 Shift : 1	(c) 02345 (d) 20345
Ans : (d) To get the required number divide 1739 by 11	RRB NIPC 04.02.2021 (Shift-I) Stage 1st
then subtract the remainder from the divisor.	Ans. (d) : The smallest five digit number that can be
158	formed from the digits 2, 3, 4, 0, 5 is $= 20345$
11)1739	39. Find sum of the smallest and the largest
11	positive numbers of 6 digits which contains
	only digits 0, 4, 6 and each of these digits
×63	appears at least once.
55	$(a) \ bbb444 \qquad (b) \ b04604 \\ (c) \ b(b(b(a)) \ b(b(a)) \ b(b(b(a)) \ b(b(a)) \ $
	$(c) \ 000000 \qquad (d) \ 1000040 \\ DDD \ NTDC \ 00 \ 02 \ 2021 \ (ch : G \ H) \ Same Life$
×89	RRB N I PC 09.02.2021 (Shift-II) Stage 1st
88	Ans. (d): According to the question-
<u></u>	\therefore Smallest 6 digit no = 400006
$\frac{1}{1}$	Greatest 6 digit no $= 666640$
Hence, the required number will be $11 - 1 - 10$.	\therefore Required sum = 400006 + 666640 = 1066646
35. Find the remainder, when 3 ¹⁰ is divided by 7.	40. How many times is digit 3 comes in counting
(a) 4 (b) 3	from 301 to 399?
(c) 5 (d) 6	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
RRB NTPC 18.04.2016 Shift : 3	(c) 121 (d) 21 (d) c 1 c c c c c c c c c c c c c c c c c
Ans : (a) $3^{10} = 3 \times 3$	KRB N IPC 10.01.2021 (Shift-II) Stage Ist
= 59049	Ans. (a) : According to the question,
59049	$ 100$'s place - $(301, 302, 303, \dots, 399) = 99$ times
$\frac{37047}{2}$	$ 10^{\circ}\text{s place} - (30, 31, 32, \dots, 39) = 10 \text{ times}$
7	$ 1^{rs} place - (03, 13, 23, \dots, 93) = 10 times$
= 4 remainder	\therefore Required answer = 99 + 10 + 10 = 119 times

41. Find the two-digit number such that the sum of	Ans. (c) : From option (c) Putting the values of A and B
its algues is 8 and the algues of the number get	in the equation.
reversed when so is added to it. (1) 25	A = 5, B = 2
(a) $/1$ (b) 35	$BA \times B3 = 57A$
(c) 62 (d) 26	$25 \times 23 = 575$
RRB NTPC 15.02.2021 (Shift-II) Stage Ist	575 = 575
Ans. (d) : Let number = $10x+y$	Hence, option (c) will be correct.
Accoding to the question,	46. The difference between the greatest and the
x+y=8(i)	smallest six-digit numbers is:
(10x+v) + 36 = 10v+x	(a) 988888 (b) 999999
9y - 9x = 36	$\begin{array}{c} (a) & 500000 \\ (b) & 888888 \\ (c) & 8888888 \\ (d) & 8999999 \\ \end{array}$
v - x = 4 (ii)	RRB NTPC 04 02 2021 (Shift_I) Stage Ist
On solving equation (i) and equation (ii)	Ang (d) a The largest six digit number is 000000
x = 2	Ans. (d): The fargest six digit number is 100000
y = 6	
Hence, required number = $10x + y = 10 \times 2 + 6 = 26$	\therefore Required difference = 999999 - 100000 = 899999
11 Inchec, required number $= 10x + y = 10 \times 2 + 0 = 20$	47. The sum of the greatest and smallest numbers
42. If the number 2895#5 is divisible by 8 and 5,	of six digits is:
then one possible choice of the digits that come	(a) 100000 (b) 199999
In the place of $\#$ and \Im can be:	(c) 999999 (d) 1099999
$\begin{array}{c} (a) & 0, 2 \\ (a) & 0, 0 \\ (a) & 0, 0 \\ (b) & 2, 2 \\ (c) & 0, 0 \\ (c) & (c) & (c) \\ (c) & $	RRB NTPC 08.02.2021 (Shift-I) Stage Ist
(c) $0, 0$ (d) $2, 0$	Ans. (d) : According to question,
RRB NTPC 13.03.2021 (Shift-II) Stage 1st	Greatest number of six-digit = 999999
Ans. (d) : Divisibility rule of '5' \Rightarrow If a number has '0'	Smallest number of six digit $= 100000$
or '5' in its unit digit then it is completely divisible by 5.	Sinallest number of six-digit $= 100000$
Divisiblity rule of '8' \Rightarrow If the last three digits of a given	Hence required sum = $9999999 + 100000$
number are divisible by '8' then number will be always	= 1099999
divisible by 8.	Hence, the required consecutive numbers will be 7 and 8.
from option 'd',	Type-3
On putting the value of $\# = 2$ and $\$ = 0$	
289320	Problems Based on Composite
$-\frac{5}{5}$	and Prime Numbers
289320	48. The greatest prime number less than 200 is:
$\frac{1}{8} \Rightarrow 36165$	(a) 199 (b) 193
0 Hence, option (d) will be correct	(c) 197 (d) 191
12 If the langest 4 digit growth an is subtracted	RRB NTPC 21.01.2021 (Shift-II) Stage Ist
43. If the largest 4–digit number is subtracted from the smallest 6 digit number then the	Ans (a) • The greatest prime number less than 200 is
from the smallest 6-digit number, then the	
romaindar will be	
remainder will be: (b) 99991	199. 40 Which of the following numbers is prime?
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001	 49. Which of the following numbers is prime? (a) 222 (b) 571
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 PBP NTPC 04 02 2021 (Shift H) Stage Let	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 512 (d) 715
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist	199. 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 - digit = 100000 The herest number of 6 - digit = 0000	199. 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Description	199. 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number $= -90001$	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17,
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 - digit = 100000 The largest number of 4 - digit = <u>-9999</u> Required number <u>= 90001</u> 44. How many significant digits are there to the	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17, 513 is divisible by 3 and 715 is divisible by 5.
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 - digit = 100000 The largest number of 4 - digit = <u>-9999</u> Required number = <u>90001</u> 44. How many significant digits are there to the right of the decimal point in the product of	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17, 513 is divisible by 3 and 715 is divisible by 5. 50. Find the smallest three digit prime number?
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 - digit = 100000 The largest number of 4 - digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554?	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17, 513 is divisible by 3 and 715 is divisible by 5. 50. Find the smallest three digit prime number? (a) 107 (b) 109
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 - digit = 100000 The largest number of 4 - digit = <u>-9999</u> Required number = <u>90001</u> 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (b) 3	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17, 513 is divisible by 3 and 715 is divisible by 5. 50. Find the smallest three digit prime number? (a) 107 (b) 109 (c) 103 (d) 101
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 - digit = 100000 The largest number of 4 - digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6	 49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17, 513 is divisible by 3 and 715 is divisible by 5. 50. Find the smallest three digit prime number? (a) 107 (b) 109 (c) 103 (d) 101
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remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number $= 90001$ 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 $= 2.445455$ So the number obtained as the product of 95.75 and	49. Which of the following numbers is prime? (a) 323 (b) 571 (c) 513 (d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option, 571 is a prime number. Whereas 323 is divisible by 17, 513 is divisible by 3 and 715 is divisible by 5. 50. Find the smallest three digit prime number? (a) 107 (b) 109 (c) 103 (d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 101 51. Which of the following pairs of numbers are co-prime? (a) 207 (b) 12 27
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 = 2.445455 So the number obtained as the product of 95.75 and 0.0254 will have 6 significant digits to the right of the	199.49. Which of the following numbers is prime?(a) 323(b) 571(c) 513(d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,571 is a prime number. Whereas 323 is divisible by 17,513 is divisible by 3 and 715 is divisible by 5.50. Find the smallest three digit prime number?(a) 107(b) 109(c) 103(d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 10151. Which of the following pairs of numbers are co-prime?(a) 28, 81(b) 12, 27(a) 28, 81(b) 12, 27(a) 28, 81(b) 26, 20
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 = 2.445455 So the number obtained as the product of 95.75 and 0.0254 will have 6 significant digits to the right of the decimal point.	199.49. Which of the following numbers is prime?(a) 323(b) 571(c) 513(d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,571 is a prime number. Whereas 323 is divisible by 17,513 is divisible by 3 and 715 is divisible by 5.50. Find the smallest three digit prime number?(a) 107(b) 109(c) 103(d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 10151. Which of the following pairs of numbers are co-prime?(a) 28, 81(b) 12, 27(c) 21, 56(d) 36, 20DED NUTPC 22.07.2021 (Cluster U) 20
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 = 2.445455 So the number obtained as the product of 95.75 and 0.0254 will have 6 significant digits to the right of the decimal point. 45. What is the value of the digits A and B?	199.49. Which of the following numbers is prime?(a) 323(b) 571(c) 513(d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,571 is a prime number. Whereas 323 is divisible by 17,513 is divisible by 3 and 715 is divisible by 5.50. Find the smallest three digit prime number?(a) 107(b) 109(c) 103(d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 10151. Which of the following pairs of numbers are co-prime?(a) 28, 81(b) 12, 27(c) 21, 56(d) 36, 20 RRB NTPC 23.07.2021 (Shift-II) Stage Ist
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 = 2.445455 So the number obtained as the product of 95.75 and 0.0254 will have 6 significant digits to the right of the decimal point. 45. What is the value of the digits A and B? BA × B3 = 57 A	199.49. Which of the following numbers is prime?(a) 323(b) 571(c) 513(d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,571 is a prime number. Whereas 323 is divisible by 17,513 is divisible by 3 and 715 is divisible by 5.50. Find the smallest three digit prime number?(a) 107(b) 109(c) 103(d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 10151. Which of the following pairs of numbers are co-prime?(a) 28, 81(b) 12, 27(c) 21, 56(d) 36, 20 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (a) : Co-prime numbers are the numbers whose
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 = 2.445455 So the number obtained as the product of 95.75 and 0.0254 will have 6 significant digits to the right of the decimal point. 45. What is the value of the digits A and B? BA × B3 = 57 A (a) A = 2, B = 4 (b) A = 3, B = 5	199.49. Which of the following numbers is prime?(a) 323(b) 571(c) 513(d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,571 is a prime number. Whereas 323 is divisible by 17,513 is divisible by 3 and 715 is divisible by 5.50. Find the smallest three digit prime number?(a) 107(b) 109(c) 103(d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 10151. Which of the following pairs of numbers are co-prime?(a) 28, 81(b) 12, 27(c) 21, 56(d) 36, 20 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (a) : Co-prime numbers are the numbers whose common factor is only 1.
remainder will be: (a) 90000 (b) 99991 (c) 80001 (d) 90001 RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (d) : The smallest number of 6 – digit = 100000 The largest number of 4 – digit = -9999 Required number = 90001 44. How many significant digits are there to the right of the decimal point in the product of 95.75 and 0.02554? (a) 5 (b) 3 (c) 4 (d) 6 RRB NTPC 11.02.2021 (Shift-I) Stage Ist Ans. (d) : 95.75 × 0.02554 = 2.445455 So the number obtained as the product of 95.75 and 0.0254 will have 6 significant digits to the right of the decimal point. 45. What is the value of the digits A and B? BA × B3 = 57 A (a) A = 2, B = 4 (b) A = 3, B = 5 (c) A = 5, B = 2 (d) A = 5, B = 3	199.49. Which of the following numbers is prime?(a) 323(b) 571(c) 513(d) 715 RRB NTPC 02.03.2021 (Shift-II) Stage Ist Ans. (b) : According to option,571 is a prime number. Whereas 323 is divisible by 17,513 is divisible by 3 and 715 is divisible by 5.50. Find the smallest three digit prime number?(a) 107(b) 109(c) 103(d) 101 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (d) : The smallest three-digit prime number = 10151. Which of the following pairs of numbers are co-prime?(a) 28, 81(b) 12, 27(c) 21, 56(d) 36, 20 RRB NTPC 23.07.2021 (Shift-II) Stage Ist Ans. (a) : Co-prime numbers are the numbers whose common factor is only 1. Hence, in the given option (28, 81) are co-prime

52. One-third of the sum of all the prime numbers greater than 5 but less than 18 is the square of:	Ans. (b) : Composite Number:- Numbers which have
(a) 3 (b) 5	Ex- 4 6 8
(c) 6 (d) 4	Prime Number:- Numbers which have only two factor
RRB NTPC 08.04.2021 (Shift-I) Stage Ist	1 and itself is called prime number.
Ans. (d) : Prime numbers greater than 5 but smaller	58. Find the number of prime number less than 20.
than $18 = 7, 11, 13, 17$	(a) 9 (b) 7
According to the question-	(C) 10 (d) 8 BBB NTPC 06 04 2021 (Shift II) Stage Ist
$=\frac{7+11+13+17}{1}$	Ans (d) \cdot Prime number less than 20
3	2, 3, 5, 7, 11,13, 17 and 19
48 16 (1)2	Hence the number of prime number less than $20 = 8$
$=\frac{1}{3}=16=(4)^{2}$	59. Three prime number are arranged in
Hence, required number $= 4$	descending order. If the product of the first two
53. Which of the following is a prime number?	is 523 and that of the last two is 221, then what is the value of the biggest prime number?
(a) 143 (b) 173	(a) 17 (b) 19
(c) 123 (d) 213	(c) 13 (d) 23
RRB NTPC 15.03.2021 (Shift-I) Stage Ist	RRB NTPC 04.03.2021 (Shift-I) Stage Ist
Ans. (b) : Prime number are the numbers, which are	Ans. (b) : Let the consecutive prime numbers are x, y
only divisible by 1 and itself.	and z in which x is biggest prime number.
(a) 1/2 is divisible by 11, so it is not a prime number	According to the question, $\mathbf{x} \times \mathbf{v} = 323$
(a) 143 is divisible by 1 and itself so it is a prime number. (b) 173 is divisible by 1 and itself so it is a prime	Taking
number.	x = 19
(c) 123 is divisible by 3, so it is not a prime number.	y = 17
(d) 213 is divisible by 3, so it is not a prime number.	$19 \times 17 = 323$
54. Find the sum of prime no. between 50 and 60.	1 a King y = 1 / and z = 13 And $17 \times 13 = 221$
(a) 118 (b) 114	So, the biggest prime number is $=$ 10
(c) 110 (d) 112 DDD NTDC 21 01 2021 (Shift I) Stage Ist	So, the biggest prime number is $-\frac{17}{17}$
Ans (d) : The prime number between 50, and 60	60. How many of the integers between 109 and 121, both inclusive are prime numbers?
53 and 59	(a) 1 (b) 0
Required Sum = $53 + 59 = 112$	(c) 2 (d) 3
55. Find the number of all prime numbers less	RRB NTPC 08.02.2021 (Shift-I) Stage Ist
than 55.	Ans. (c): Two integers (109, 113) between 109 and 121
(a) 18 (b) 17	toth inclusive are prime numbers.
(c) 16 (d) 15	34?
RRB N I PC 30.12.2020 (Shift-I) Stage Ist	(a) 1, 3, 5, 7 (b) 3, 5, 7, 9
Ans. (c): The number of all prime numbers less than 55 is 16	(c) 3, 5, 11, 13 (d) 3, 7, 11, 13
$i_{e} \rightarrow (2 \ 3 \ 5 \ 7 \ 11 \ 13 \ 17 \ 19 \ 23 \ 29 \ 31 \ 37 \ 41 \ 43$	RRB NTPC 04.04.2016 Shift : 2
47, 53)	Ans : (d) From option- (d)
56. The number of pairs of twin primes between 1	3 + 7 + 11 + 13 = 34
and 100 are:	62. In a prime number
(a) 7 (b) 8	(a) There are more than two divisors.
(c) 10 (d) 9 DDD NTDC 2(07 2021 (Shift D) Stage Let	(b) The number divided by itself and 1. (c) It has no divisor
KRB NIPC 20.07.2021 (Shift-1) Stage Ist	(d) Is not a positive integer.
1 and 100 are 8	RRB NTPC 30.03.2016 Shift : 2
The numbers are -	Ans: (b)
$\{(3,5), (5,7), (11,13), (17,19), (29,31), (41,43), (59,61), (71,73)\}$	A prime number is divided by only itself and 1.
((0,0), (0,0), (1,10), (1,10), (2,00), (0,00), (0,00), (0,00)	63. Find out which of the following sets form co-
difference is 2	prime numbers. (a) $(12, 7)$ (b) $(21, 42)$
57 The number that has factors other than 1 and	$ \begin{array}{c} (a) & (12, 7) \\ (c) & (3, 9) \end{array} \qquad (b) & (21, 42) \\ (d) & (43, 129) \end{array} $
itself is called a number.	RRB NTPC 18.01.2017 Shift : 1
(a) Prime Number (b) Composite Number	Ans : (a) Co-prime numbers- The set of two such
(c) Even Number (d) Odd Number	numbers whose HCF is 1, is called co-prime numbers.
RRB NTPC 26.07.2021 (Shift-I) Stage Ist	\therefore In option (a), HCF of the numbers (12, 7) = 1

64. Which of the following is an odd composite number?	69. In a class of 80 students $\frac{1}{10}$ of the class likes
(a) 13 (b) 17 (c) 12 (d) 15 RRB NTPC 18.01.2017 Shift : 2	chocolate D and $\frac{1}{20}$ of the class likes chocolate
Ans : (d) In the given options odd composite number will be 15.	E. What is the difference between the number of students who like chocolate D and the number of students who like chocolate E^2
65. Find the sum of first 8 odd prime numbers. (a) 77 (b) 98 (c) 75 (d) 100 RRB NTPC 19.04.2016 Shift : 2	(a) 2 (b) 9 (c) 5 (d) 4 RRB NTPC (Stage-2) $17/06/2022$ (Shift-I)
Ans : (b) First 8 odd prime numbers = 3, 5, 7, 11, 13, 17, 19, 23	Ans. (d) : Students who likes chocolate D = $80 \times \frac{1}{10}$
Sum of the humbers $= 3 + 5 + 7 + 11 + 15 + 17 + 19 + 25 = 98$ 66. How many prime numbers are between	= 8
positive integers 60 and 100? (a) 9 (b) 6 (c) 7 (d) 8	Students who likes chocolate $E = 80 \times \frac{1}{20}$ = 4
(C) / (a) 8 RRB NTPC 06.04.2016 Shift : 1	Hence the required difference $= 8-4 = 4$
Ans : (d) The prime numbers between 60 and 100 = 61, 67, 71, 73, 79, 83, 89, 97	70. Sunita won 3/5 of the marbles that were there in the beginning of the game. Ravi won 2/3 of the remaining marbles while Sunny won the
Hence, Total 8 prime numbers will be between 60 and 100.	remaining 60 marbles. How many marbles did Sunita Win? (a) 255 (b) 240 (c) 285 (d) 270
Type - 4	RRB NTPC (Stage-II) –12/06/2022 (Shift-I)
Problems Based on Basic	Ans. (d) : Let, number of marbles be x .
Concept of Numbers	Won by Sunita $=\frac{3x}{5}$
67. If each packet contains the same number of	3 3x 2x
pencils and there are 96 pencils in all in 12	Number of remaining marbles = $x - \frac{1}{5} = \frac{1}{5}$
packets, how many packets will one have to nurchase if one requires 304 nencils?	Won by Pavi $-\frac{2x}{2} \times \frac{2}{2} - \frac{4x}{4}$
(a) 39 (b) 38 (c) 33 (d) 36	Woll by Ravi $= \frac{1}{5} \times \frac{3}{3} = \frac{1}{15}$
RRB NTPC (Stage-II) –16/06/2022 (Shift-II)	According to the question, $2x = 4x$
Ans. (b) : \therefore Pencils present in 12 packets = 96	$\frac{3x}{5} + \frac{4x}{15} + 60 = x$
: Pencils present in 1 packet = $\frac{96}{12}$ = 8 Pencils	$60 = x - \left(\frac{3x}{5} + \frac{4x}{15}\right)$
$=\frac{304}{8} = 38 \text{ Packets.}$	$60 = x - \frac{13x}{15}$
68. From 3/4 of a number P, Ramakrishna subtracts 2/3 of another number Q and obtain	$\therefore \frac{2x}{15} = 60 \Longrightarrow x = 450$
5/8 as the difference. What is the answer Ramakrishna should obtain if he subtracts	Number of marbles won by Sunita = $450 \times \frac{3}{5} = 270$
eight times of Q from fine times of P? 15 25 20 25	71. If the sum of five consecutive multiples of 2 is
(a) $\frac{15}{2}$ (b) $\frac{25}{4}$ (c) $\frac{26}{3}$ (d) $\frac{25}{3}$	(a) 162 (b) 130
RRB NTPC (Stage-II) –12/06/2022 (Shift-II)	(c) 125 (d) 136
Ans. (a) : According to the question,	Ans. (d) : Let the five consecutive multiple of 2 –
$P \times \frac{3}{2} - O \times \frac{2}{2} = \frac{5}{2}$	2x, 2x+2, 2x+4, 2x+6, 2x+8
4 3 8	According to the question, 2x + 2x + 2 + 2x + 4 + 2x + 6 + 2x + 8 = 660
$\Rightarrow \frac{3P}{1} - \frac{2Q}{2} = \frac{5}{2} \Rightarrow \frac{9P - 8Q}{12} = \frac{5}{2}$	10x+20=660
4 3 8 12 8	10x=640
$\Rightarrow 9P - 8Q = \left(\frac{5}{8}\right) \times 12 \Rightarrow 9P - 8Q = \frac{60}{8}$	x = 64 Hence, largest number = $2x + 8 = 2 \times 64 + 8$ = $128 + 8$
$\therefore 9P - 8Q = \frac{15}{2}$	

72. In a farmer's nouse, there are chickens and	3 5
goats. The total number of their heads is 42 and	Number of absent students = $1 - \frac{3}{8} = \frac{3}{8}$ of total
the total number of their legs is 138. Find the number of chickens.	students
(a) 15 (b) 18	Total number of absent students = $48 \times \frac{5}{2}$
(c) 20 (d) 22	= 30 students
KKB NIPC 01.02.2021 (Snift-1) Stage 1st Ang. (a) L at the number of chickens $= x$	76 1200 apples were distributed among a group of
Ans. (a): Let the number of chickens = x Number of goats = v	boys. Each boy got thrice time of the apples as
According to the question,	the number of boys in that group. The number
x + y = 42(i)	of boys in the group was. (a) 15 (b) 20
2x + 4y = 138 (ii)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
On solving the equation (1) \times 4 and (11)	RRB NTPC 03.02.2021 (Shift-I) Stage Ist
4x + 4y = 168	Ans. (b) : Let the no. of boys in group = x
$2x \pm 4y = 138$	No. of apple got by each boy = $3x$
	Total no. of apples = $x \times 3x = 1200$
2x = 30	3x - 1200 $x^2 = 400$
x = 15	x = 20
Hence, the number of chickens = $x = 15$	No. of boys $(x) = 20$
73. In a class of 40 students, the number of girls is	77 Supile had 0^{1} by offlour to make bread with
three fifth of the humber of boys. Then find the number of boys in the class	77. Suma nau $9-kg$ of nour to make bread with. 4
(a) 18 (b) 25	If the regine says that she needs $1-ka$ to make
(c) 14 (d) 15	in the recipe says that she needs 1 kg to make
RRB NTPC 22.02.2021 (Shift-I) Stage Ist	one loaf of bread, how many loaf can she
Ans. (b) : Let the number of boys be x.	(a) 8 (b) 7
Then the number of girls = $x \times \frac{3}{z}$	(c) 9 (d) 10
5 2	RRB NTPC 30.12.2020 (Shift-I) Stage Ist
Total number of students in the class = $x + \frac{3}{2}x = 40$	Ans. (a) :
Total number of students in the class $x + \frac{1}{5}x = 10$	
$\frac{1}{8}$	1 37
$\frac{8}{5}x = 40$	$9\frac{1}{2}$ $\frac{37}{2}$
$\frac{8}{5}x = 40$	Number of loaves = $\frac{4}{-4} = \frac{4}{-4}$
$\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$	Number of loaves = $\frac{9 - \frac{37}{4}}{\frac{4}{1} - \frac{4}{9}}$
$\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$.	Number of loaves = $\frac{9-4}{1} = \frac{37}{-4}$ $\frac{4}{1} = \frac{4}{-1}$
From number of statements in the class $x + \frac{5}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$.	Number of loaves = $\frac{9}{-1} = \frac{37}{-1}$ $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-1}$ $\frac{1}{-1} = -\frac{8}{-1}$ $\frac{8}{-1} = \frac{8}{-1}$
Four humber of statents in the class $x + \frac{5}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get?	Number of loaves = $\frac{9}{-4} = \frac{37}{-4}$ $\frac{1}{-4} = \frac{4}{-4}$ $\frac{1}{-4} = \frac{9}{-4}$ $\frac{1}{-4} = \frac{9}{-4}$ $\frac{1}{-4} = \frac{9}{-4}$ $\frac{37 \times 8}{-4 \times 9} = \frac{74}{-9} = 8.22$
Four humber of statistic in the class $x + \frac{5}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g	Number of loaves = $\frac{9 - \frac{37}{4}}{1} = \frac{4}{9}$ $\frac{1 - \frac{9}{4}}{1} = \frac{4}{9}$ $\frac{1 - \frac{9}{4}}{1} = \frac{37 \times 8}{8}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8
Four humber of statistic in the class $x + 5$ $x = 10^{-5}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g BPB NTEC 00 01 2021 (Shift L) Stage Lat	Number of loaves = $\frac{4}{4} = \frac{4}{4}$ Number of loaves = $\frac{4}{4} = \frac{4}{9}$ $\frac{1}{1} = \frac{9}{9}$ $\frac{1}{1} = \frac{9}{9}$ $\frac{1}{2} = \frac{9}{9}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both
Four humber of statistic in the class $x + \frac{5}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans (d) : According to the question	Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-1}$ $\frac{1}{-1} = \frac{9}{-1}$ $\frac{1}{-1} = \frac{9}{-1}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad?
Four number of statistic in the class $x + \frac{5}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, 15 15 3	Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-11}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558
From number of statistic in the ends $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$	Number of loaves = $\frac{4}{1} = \frac{4}{1}$ Number of loaves = $\frac{4}{1} = \frac{4}{1}$ $\frac{1}{1} = \frac{9}{1-}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556
From number of statents in the class $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{20} \text{ kg} = \frac{3}{20} \text{ kg}$	Number of loaves = $\frac{4}{4} = \frac{4}{1}$ Number of loaves = $\frac{4}{4} = \frac{4}{1}$ $\frac{1}{9}$ $\frac{1}{1} = \frac{9}{9}$ $\frac{1}{1} = \frac{9}{1}$ $\frac{1}{8} = \frac{9}{1}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 RRB NTPC 17.01.2021 (Shift-II) Stage Ist
From number of statements in the class $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$	Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-1$
Four number of statistic in the class $x + \frac{5}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day,	Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-1$
Four number of statistic in the class $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, anly $\frac{3}{20}$ of the students were present: the number	Number of loaves = $\frac{4}{4} = \frac{4}{1}$ Number of loaves = $\frac{4}{4} = \frac{4}{1}$ $\frac{1}{9}$ $\frac{1}{1} - \frac{9}{1}$ $\frac{1}{-} - \frac{8}{8}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 RRB NTPC 17.01.2021 (Shift-II) Stage Ist Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99
Four hander of statistic in the class $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number	Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-11}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 RRB NTPC 17.01.2021 (Shift-II) Stage Ist Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99 = 90×2
Four humber of statistic in the class $x + y = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number of absentees on the same day would be:	Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ Number of loaves = $\frac{4}{-1} = \frac{4}{-1}$ $\frac{1}{-1} = \frac{9}{-11}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 <u>RRB NTPC 17.01.2021 (Shift-II) Stage Ist</u> Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99 = 90×2 = 180
Four hander of statistic in the class $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number of absentees on the same day would be: (a) 28 (b) 38 (c) 30 (d) 18	Number of loaves = $\frac{4}{1} = \frac{4}{1}$ Number of loaves = $\frac{4}{1} = \frac{4}{1}$ $\frac{1}{9}$ 1 8 $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 <u>RRB NTPC 17.01.2021 (Shift-II) Stage Ist</u> Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99 = 90×2 =180 Again, no. of buttons on number pad pressed from 100 to
Four number of statistic in the class $x + \frac{1}{5}x = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number of absentees on the same day would be: (a) 28 (b) 38 (c) 30 (d) 18 RRB NTPC 04.01.2021 (Shift-I) Stage Ist	Number of loaves = $\frac{4}{1} = \frac{4}{1}$ Number of loaves = $\frac{4}{1} = \frac{4}{1}$ $\frac{1}{1} = \frac{9}{1-1-1}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 RRB NTPC 17.01.2021 (Shift-II) Stage Ist Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99 = 90 \times 2 = 180 Again, no. of buttons on number pad pressed from 100 to 222 = 122 \times 2
Four number of statistic in the class $x + y = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number of absentees on the same day would be: (a) 28 (b) 38 (c) 30 (d) 18 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Total number of students in the class = 48	Number of loaves = $\frac{4}{4} = \frac{4}{1}$ Number of loaves = $\frac{4}{4} = \frac{4}{1}$ $\frac{1}{9}$ $\frac{1}{1-}$ $\frac{9}{1-}$ $\frac{1}{-}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{9}{1-}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{9}{1-1}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{37}{1-1}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{3}{1-1}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{3}{1-1}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{3}{1-1}$ $\frac{1}{9}$
Four humber of students in the class $x + y = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number of absentees on the same day would be: (a) 28 (b) 38 (c) 30 (d) 18 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Total number of students in the class = 48 (Given)	Number of loaves = $\frac{4}{4} = \frac{4}{1}$ Number of loaves = $\frac{4}{1} = \frac{4}{1}$ $\frac{1}{9}$ $\frac{1}{1-}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 RRB NTPC 17.01.2021 (Shift-II) Stage Ist Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99 = 90×2 =180 Again, no. of buttons on number pad pressed from 100 to 222 = 123 × 3 = 369 Hence, total no. of buttons pressed on the number pad
Four humber of statistic in the class $x + y = 10^{-10}$ $\frac{8}{5}x = 40$ $x = 40 \times \frac{5}{8} = 25$ Hence, the number of boys in the class $x = 25$. 74. A 1.5 kg cake is divided equally among 10 boys. How much cake will each boy get? (a) 10 g (b) 1500 g (c) 15 g (d) 150 g RRB NTPC 09.01.2021 (Shift-II) Stage Ist Ans. (d) : According to the question, $1.5 \text{ kg cake} = \frac{1.5}{10} \text{ kg} = \frac{15}{100} \text{ kg} = \frac{3}{20} \text{ kg}$ $\frac{3}{20} \times 1000 \Rightarrow 150 \text{ g}$ 75. A class has 48 students, on a specific day, only $\frac{3}{8}$ of the students were present; the number of absentees on the same day would be: (a) 28 (b) 38 (c) 30 (d) 18 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Total number of students in the class = 48 (Given) Number of present students = $\frac{3}{2}$ of total students	Number of loaves = $\frac{4}{4} = \frac{4}{1}$ Number of loaves = $\frac{4}{1} = \frac{4}{9}$ $\frac{1}{9} = \frac{7}{9} = \frac{4}{9} = \frac{4}{9}$ $\frac{37 \times 8}{4 \times 9} = \frac{74}{9} = 8.22$ Hence, number of loaves = 8 78. If Reeta types the numbers from 2 to 222, both inclusive, then how many times will she have to press the buttons on the number pad? (a) 555 (b) 558 (c) 557 (d) 556 RRB NTPC 17.01.2021 (Shift-II) Stage Ist Ans. (c) : According to the question, No. of buttons on the number pad pressed from 2 to 9 = 8 No. of buttons on number pad pressed from 10 to 99 = 90 \times 2 = 180 Again, no. of buttons on number pad pressed from 100 to 222 = 123 \times 3 = 369 Hence, total no. of buttons pressed on the number pad = 8 + 180 + 369

Of the residents of a housing society, $\frac{13}{18}$ own a Ans. (c) : Let the two numbers are x and y According to the question, 79. x + y = 40(i) cars and 48/65 of the car owners have $x \times y = 60$ (ii) and purchased covered parking space. If 136 of the Sum of reciprocal of numbers = $\frac{1}{x} + \frac{1}{y} = \frac{x+y}{xy}$ residents parked the car in the open, how many residents were there in the society. (d) 650 (a) 900 (b) 720 (c) 630 From equation (i) and (ii) RRB NTPC 31.01.2021 (Shift-I) Stage Ist $=\frac{40}{3}$ Ans. (b) : Let the total number of residents in the 60 society = x83. What is the sum of the cubes of the natural Number of people who have a car = $x \times \frac{13}{18}$ numbers from 5 to 14? (a) 10930 (b) 10925 Number of people who purchased covered parking (c) 10935 (d) 10920 space $=\frac{13x}{18} \times \frac{48}{65} = \frac{8x}{15}$ RRB NTPC 04.02.2021 (Shift-I) Stage Ist Ans. (b): The sum of the cubes of natural number According to the question, $=\left[\frac{n(n+1)}{2}\right]^2$ $\frac{\frac{13x}{18} - \frac{8x}{15}}{\frac{65x - 48x}{90}} = 136$ Sum of cubes of all natural numbers from 5 to 14 = [Sum of cubes of number 1 to 14] - [Sum of cubes of numbers 1 to 4] $\frac{17x}{90} = 136$ $= \left[\frac{14(14+1)}{2}\right]^2 - \left[\frac{4(4+1)}{2}\right]^2$ $= (105)^2 - (10)^2$ = 11025 - 100 = 10925 $\mathbf{x} = \frac{136 \times 90}{17} = \frac{12240}{17} = 720$ Pragva invited male and females to her 80. If the difference between squares of two 84. birthday party in the ratio of 7 : 6. If the consecutive positive odd integers is 56, then the number of males in the party were 56, then the two consecutive odd integers are. total number of guests attending the party were? (a) 17,19 (b) 13,15 (a) 48 (b) 104 (c) 108 (d) 112 (c) 11,13 (d) 15,17 RRB NTPC 07.01.2021 (Shift-II) Stage Ist RRB NTPC 07.01.2021 (Shift-I) Stage Ist **Ans. (b) :** Let number of males = 7x**Ans.** (b) : Suppose first odd number = aand, number of female = 6xand, second consecutive odd number = a+2According to the question-According to the question, 7x = 56 $(a+2)^2 - (a)^2 = 56$ x = 8 $a^2 + 4 + 4a - a^2 = 56$ \therefore Total number of guests = 7x + 6x $a = \frac{52}{4} = 13$ = 13x $= 13 \times 8$ = 104First Number (a) = 1381. What is the sum of the cube of the natural Second Number (a + 2) = 13 + 2 = 15numbers from 1 to 10, both inclusive? An orchard has 5776 trees and 85. the (a) 3023 (b) 3025 arrangement of trees is such that there are as (c) 3024 (d) 3022 many rows as there are trees in a row. Then the RRB NTPC 08.02.2021 (Shift-I) Stage Ist number of rows is: Ans. (b) : The sum of the cube of the natural numbers (a) 48 (b) 76 from 1 to 10-(c) 65 (d) 56 $=1^{3}+2^{3}+3^{3}+4^{3}+5^{3}+6^{3}+7^{3}+8^{3}+9^{3}+10^{3}$ RRB NTPC 13.03.2021 (Shift-II) Stage Ist Ans. (b) : Let the number of trees be X and the number $= \left(\frac{10 \times 11}{2}\right)^2 \qquad \left\{:: \Sigma n^3 = \left[\frac{n(n+1)}{2}\right]^2\right\}$ of rows also X. According to the question, $X \times X = 5776$ $X^2 = 5776$ $=\frac{100 \times 121}{4}=3025$ X = 76 82. The sum of two numbers is 40 and their Hence, the number of rows (X) = 76product is 60. The sum of their reciprocals is: 86. What is the sum of the squares of the numbers (a) $\frac{3}{4}$ (b) $\frac{3}{2}$ (c) $\frac{2}{3}$ (d) $\frac{1}{2}$ from 3 to 18? (a) 2103 (b) 2102 (c) 2101 (d) 2104 RRB NTPC 04.02.2021 (Shift-I) Stage Ist RRB NTPC 09.02.2021 (Shift-II) Stage Ist

Ans. (d)	$\rightarrow 25+15-20$
n(2n+1)(n+1)	\rightarrow $a = \frac{2}{2} = 20$
Sum of squares of the first 'n' terms $= \frac{6}{6}$	25-15
Sum of squares of numbers form 3 to 18	$b = \frac{1}{2} = 5$
Sum of squares of numbers form 5 to 18 $(z^2 - z^2 - z^2) = (z^2 - z^2)$	Hence the ratio of the numbers $a \cdot b = 20 \cdot 5 = 4 \cdot 1$
$= (1^{2} + 2^{2} + 3^{2} + 4^{2} + \dots + 18^{2}) - (1^{2} + 2^{2})$	The field of the numbers $a \cdot b = 20 \cdot 3 = 4 \cdot 1$
$18(18 \times 2 \pm 1)(18 \pm 1)$	90. The sum of two number is 16 and their product
$=\frac{10(10\times2+1)(10+1)}{-5}$	is os. The sum of their reciprocal is equal to:
6	(a) $\frac{16}{63}$
18×37×19 5	(a) 63 (b) 16
=	8 60
-2109-5	(c) $\frac{d}{c^2}$ (d) $\frac{d}{c^2}$
- 2109 - 5	05 05 DDD NTDC 04 01 2021 (Shift I) Stars Lat
= 2104	KKB NIPC 04.01.2021 (Snift-1) Stage 1st
87. The sum of two numbers is 20 and their	Ans. (a): Let the numbers be x and y
product is 96. What is the difference between	According to the question,
the two numbers?	x + y = 16 (i)
(a) 4 (b) 5	and $\mathbf{x} \times \mathbf{y} = 63$ (ii)
(c) 6 (d) 8	1 1 1
RRB NTPC 08.02.2021 (Shift-II) Stage I	then, $-+-=?$
Ans (a) \cdot I at the two numbers are y and y	A Y
Ans. (a) . Let the two numbers are x and y.	$\frac{\mathbf{x} + \mathbf{y}}{\mathbf{x} + \mathbf{y}} = \frac{16}{10}$
According to the question,	xy 63
x + y = 20	91 The difference between two numbers which are
xy = 96	in the ratio $5 \cdot 3$ is 50 What is the product of
From $\mathbf{x} - \mathbf{y} = \sqrt{(\mathbf{x} + \mathbf{y})^2 - 4\mathbf{x}\mathbf{y}}$	the numbers?
$1011, x y \gamma(x + y) + xy$	(a) 1035 (b) 9375
$-\sqrt{(20)^2}$ 4×96	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$-\sqrt{(20)}$ - 4×90	$\begin{array}{c} (c) & 0.575 \\ \hline \\ DDD & NTDC & 0.9 & 0.4 & 2021 & (Shift II) & Stegge Ist \\ \end{array}$
$=\sqrt{400-384}$	KKB N I C 00.04.2021 (Sint-II) Stage Ist
$-\sqrt{16}$	Ans. (b) : Let the numbers are 5x and 3x
$=\sqrt{10}$	As per question,
= 4	5x - 3x = 50
88. If the sum of two numbers is 30 and the	2x = 50
product is 50, then the sum of their reciprocals	x = 25
is:	Hence, the product of two numbers $= 5x \times 3x = 15x^2$
\sim 3 \sim 5	$= 15 \times 25^2 = 9375$
(a) $\frac{-}{5}$ (b) $\frac{-}{3}$	3
$\frac{1}{2}$	92. $\frac{1}{5}$ of a number is 10 more than half of the
(c) $\frac{2}{-}$ (d) $\frac{3}{-}$	5
5 2	second number. If 8 is subtracted from $\frac{3}{2}$ of the
RRB NTPC 29.01.2021 (Shift-II) Stage I	
Ans. (a) : Let the numbers be x and y –	first number, then it becomes 4 less than half of
Given,	the second number. What is the sum of the two
x + y = 30(i)	numbers?
xy = 50(ii)	(a) 56 (b) 57
The sum of reciprocals of numbers	(c) 54 (d) 55
1 1 v v	RRB NTPC 08.04.2021 (Shift-II) Stage 1st
$=$ $\frac{1}{-}$ $+$ $\frac{1}{-}$ $=$ $\frac{x+y}{-}$	Ans. (b) : Let the no. be x and y
х у ху	According to the question,
20 2	3 y 10
50 5	
$=\frac{30}{50}=\frac{3}{5}$	$\frac{-x - z}{5} = 10$
$=\frac{30}{50}=\frac{3}{5}$	$\frac{-x - z}{5} = 10$ 6x - 5y = 100(i)
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their	$\frac{-x - z}{5} = 10$ 6x - 5y = 100(i)
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is?	$\begin{array}{c} -\frac{1}{5}x - \frac{1}{2} = 10\\ 6x - 5y = 100\\ \text{and} \frac{3}{-}x - 8 = \frac{y}{-} - 4 \end{array}$ (i)
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3	$\frac{-5x - 2}{2} = 10$ 6x - 5y = 100(i) and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3	$ \frac{-5}{5}x - \frac{1}{2} = 10 $ $ 6x - 5y = 100 \qquad(i) $ and $ \frac{3}{7}x - 8 = \frac{y}{2} - 4 $ $ 6x - 7y = 56 \qquad(ii) $
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3 RRB NTPC 04.01.2021 (Shift-I) Stage Ist	$\frac{-5}{5}x - \frac{1}{2} = 10$ $6x - 5y = 100 \qquad \dots(i)$ and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$ $6x - 7y = 56 \qquad \dots(ii)$ On subtracting equation (ii) from equation(i)
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3 RRB NTPC 04.01.2021 (Shift-I) Stage Ist	$\frac{-5}{5} \times \frac{-2}{2} = 10$ $6x - 5y = 100 \qquad \dots(i)$ and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$ $6x - 7y = 56 \qquad \dots(ii)$ On subtracting equation (ii) from equation(i) 2y = 44
$=\frac{50}{50}=\frac{5}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Let the numbers be a and b. Assording to the quantian	$\frac{-5}{5} \times \frac{-2}{2} = 10$ $6x - 5y = 100 \qquad \dots(i)$ and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$ $6x - 7y = 56 \qquad \dots(ii)$ On subtracting equation (ii) from equation(i) 2y = 44 y = 22
$=\frac{50}{50}=\frac{5}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Let the numbers be a and b. According to the question, a + b = 25 (i)	$\frac{-5}{5} \times \frac{-2}{2} = 10$ $6x - 5y = 100 \qquad \dots(i)$ and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$ $6x - 7y = 56 \qquad \dots(ii)$ On subtracting equation (ii) from equation(i) 2y = 44 y = 22 $100 + 5 \times 22 \qquad 25 \qquad (5 \qquad i = 0)$
$=\frac{50}{50}=\frac{5}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Let the numbers be a and b. According to the question, a + b = 25 (i) (i)	$\frac{-5}{5} \times \frac{-2}{2} = 10$ $6x - 5y = 100 \qquad \dots(i)$ and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$ $6x - 7y = 56 \qquad \dots(ii)$ On subtracting equation (ii) from equation(i) 2y = 44 y = 22 $x = \frac{100 + 5 \times 22}{6} = 35 \qquad \text{{from equation (i)}}$
$=\frac{30}{50}=\frac{3}{5}$ 89. The sum of two numbers is 25 and their difference is 15. The ratio of the numbers is? (a) 3:2 (b) 5:3 (c) 4:1 (d) 2:3 RRB NTPC 04.01.2021 (Shift-I) Stage Ist Ans. (c) : Let the numbers be a and b. According to the question, a + b = 25 (i) a - b = 15 (ii)	$\frac{-5}{5} \frac{-2}{2} = 10$ 6x - 5y = 100(i) and $\frac{3}{7}x - 8 = \frac{y}{2} - 4$ 6x - 7y = 56(ii) On subtracting equation (ii) from equation(i) 2y = 44 y = 22 $x = \frac{100 + 5 \times 22}{6} = 35$ {from equation (i)} Hence, sum of two numbers = x+y = 35+22 = 57

93. There are 2401 students in a school. The PT	Ans. (b) : Let four consecutive numbers be x , $(x + 1)$,
teacher wants all of them to stand in rows and	(x+2) and $(x+3)$
number of rows is equal to the number of	According to question,
columns.	x + (x + 1) = x + 3
(a) 29 (b) 39 (c) 49 (d) 19	X - Z
RRB NTPC 10.02.2021 (Shift-II) Stage Ist	Half of the sum of four number = $\frac{4x+6}{2} = 2x+3$
Ans. (c) : Let number of Rows $= x$	$^{2} = 2 \times 2 + 3$
then number of columns $= x$	= 7
Number of students in school = $2401(given)$	98. 24 mango trees, 56 apple trees and 72 orange
According to the question, \therefore Number of rows \times Number of columns = 2401	trees have to be planted in rows such that each
$x \times x = 2401$	row contains the same number of trees of one
$x^{2} = 2401$	variety only. Find the minimum number of
$\begin{array}{c} x = 2101 \\ x = 49 \end{array}$	rows in which the above mentioned trees may
Hence, the number of rows $(x) = 49$	be planted. (b) 15
94. The sum of two numbers is 27 and the	$ \begin{array}{c} (a) 15 \\ (b) 17 \\ (c) 17 \\ (d) 10 \\ (d) $
difference of their squares is 243. What is the	(C) 17 (U) 19 RRR NTPC 04 01 2021 (Shift_II) Stage Ist
difference between the numbers?	Ans (d):
(a) 42 (b) 9 (c) 72 (d) 3	(Number of total columns × Number of total rows)
RRB NTPC 05.02.2021 (Shift-I) Stage 1st	$24 = 8 \times 3$
Ans. (b) : Let us the numbers be x and y respectively.	$56 = 8 \times 7$
Given, $y + y = 27$ (i)	$72 = 8 \times 9$
x + y - 2/ (1) $x^2 - y^2 = 2/3$	Total number of trees = $8(3 + 7 + 9)$
(x-y)(x+y) = 243 (ii)	Total number of rows = $3 + 7 + 9 = 19$
Putting value of $(x + y)$ from eq ⁿ (i) in eq (ii),	99. What is the sum of the cubes of the first four
$(x-y) \times 27 = 243$	natural numbers?
243	(a) 96 (b) 84
$(x-y) = \frac{1}{27} = 9$	(c) 100 (d) 1000
So, difference between the numbers $= x-y=9$	RRB N I PC 23.07.2021 (Shift-I) Stage 1st
95. What is the sum of the squares of the numbers	Ans. (c) :
from 1 to 12?	$\begin{bmatrix} n & n & n \end{bmatrix}^2$
(a) 655 (b) 660	Sum of cube of n natural numbers = $\frac{1}{2}$
(c) 650 (d) 665	\therefore Sum of the cubes of the first four natural numbers
RRB N I PC 04.02.2021 (Shift-II) Stage 1st	$\left[f_{A}(A+1) \right]^{2}$
Ans. (c) : $1^2 + 2^2 + 3^2 + \dots + 12^2$	$=\left \frac{4(4+1)}{2}\right $
From, Sum of the square of the first n natural numbers	
$=\frac{n(n+1)(2n+1)}{2n+1}$	= 100
6	100 6 of the needle present in a hall are sitting in
$-12 \times 13 \times 25$ _ 650	100. — of the people present in a nall are sitting in 11
$-\frac{-6}{6} = 0.00$	9 of the choice and the next and
96. Find the least number which must be added to	$\frac{14}{14}$ of the chairs available, and the rest are
the number 6412 to get a perfect square.	standing. If there are 30 empty chairs, how
(a) 149 (b) 129	many people in the hall are standing?
(c) 181 (d) 150	(a) 40 (b) 35
RKB NIPC 12.01.2021 (Snift-II) Stage 1st $(22)^2$ (400)	(c) 30 (d) 45
Ans. (a): $(80) = 6400$	RKB NIFC 25.07.2021 (Sint-1) Stage 1st
$(81)^{2} = 6561$	Ans. (d) : Let the number of total chairs $= x$
Hence on adding $0301 - 0412 = 149$, 0412 will be the perfect square	Then empty chairs = $x - \frac{9x}{2} = \frac{5x}{2}$
97 Out of four consecutive numbers the sum of	14 14
the first two numbers is equal to the fourth	According to the question $\frac{X \times 5}{2} - 30$
number. What is half of the sum of the four	14
numbers.	x = 84 (Number of total chairs)
(a) 14 (b) 7	Hence, number of people sitting on the chairs.
(c) 9 (d) 2	$\Rightarrow 84 - 30 = 54$
RRB NTPC 12.01.2021 (Shift-II) Stage Ist	Let the total number of people be y then,

Ans. (b) : Total number of handshakes $\frac{\mathbf{y} \times \mathbf{6}}{11} = 54$ $=\frac{n}{2}(n-1)$ or y = 99 people : Number of people standing in the hall = $=\frac{30}{2}(30-1)$ $y\left(1-\frac{6}{11}\right) = y \times \frac{5}{11}$ $= 15 \times 29$ Hence, Number of people standing in the hall = $\frac{99 \times 5}{100}$ = 43511 If the sum of two numbers is 26 and their 105. = 45 people difference is 12. Find the difference of their 101. One-fourth of one-eight of a number is 300. squares. What is one fifth of the same number? (b) 312 (a) 296 (a) 1900 (b) 1910 (d) 336 (c) 324 (c) 1920 (d) 1890 **RRB NTPC 05.04.2016 Shift : 2** RRB NTPC 03.03.2021 (Shift-I) Stage Ist **Ans : (b)** Let the numbers be x and y. Ans. (c) : Let the required number = xx + y = 26According to the question, x - y = 12:. The difference of the squares, $= x^{2} - y^{2}$ = (x + y) (x - y) $\left(x \times \frac{1}{8}\right) \times \frac{1}{4} = 300$ $x = 300 \times 32 \implies x = 9600$ $= 26 \times 12 = 312$ \therefore Required answer = $9600 \times \frac{1}{5} = 1920$ If the product of two numbers is thrice of their 106. sum, if 1st number is 12 find the 2nd number. 102. Two-fifth of one-fourth of three-seventh of a (b) 3 (a) 2 number is 15. What is the half of that number? (c) 4 (d) 5 (a) 375 (b) 175 RRB NTPC 04.04.2016 Shift : 1 (c) 300 (d) 170 **Ans : (c)** Let the 2^{nd} number be x. RRB NTPC 09.02.2021 (Shift-I) Stage Ist $\mathbf{x} \times 12 = (\mathbf{x} + 12) \times 3$ **Ans. (b) :** Let the number is x 12x = 3x + 36According to the question, 9x = 36 $\mathbf{x} \times \frac{3}{7} \times \frac{1}{4} \times \frac{2}{5} = 15$ Hence, x = 4107. Find the smallest four digit number which is a x = 350perfect square. then, half of that number = $\frac{350}{2}$ (b) 1024 (a) 1000 (d) 1064 (c) 1081 = 175**RRB NTPC 04.04.2016 Shift : 1** 103. Instead of multiplying a number by 2, Rahul Ans : (b) The smallest 4 digit number = 1000 divided it by 2 and got the answer as 2. What 32 should be the actual answer? 1000 3 (a) 4 (b) 8 (c) 6 (d) 2 +3 9 RRB NTPC 25.01.2021 (Shift-I) Stage Ist 62 100 **Ans. (b) :** Let the number be = x2 124 On dividing x by 2, -24 $\frac{x}{2} = 2$ Hence, the smallest 4 digit perfect square number = 1000 + 24x = 4= 1024 \therefore Actual answer = 2x 108. A number when multiplied by $\frac{6}{5}$ gives $\frac{108}{125}$. $= 2 \times 4 = 8$ 104. In a reunion of class XII, out of 45 students, 30 The number is : students participated in the function. If all 625 (b) $\frac{648}{625}$ present in the function shake hands with one (a) 648 other, find the total number of handshakes. (d) $\frac{25}{18}$ (b) 435 (a) 870 (c) 25 (c) 841 (d) 900 RRB NTPC 12.01.2021 (Shift-I) Stage Ist RRB NTPC 15.03.2021 (Shift-II) Stage I

Ans. (c) : Let the number = x $\frac{-9y}{2} = -30$ As per question $x \times \frac{6}{5} = \frac{108}{125}$ or $x = \frac{108 \times 5}{6 \times 125}$ $y = \frac{20}{3}$ $x = \frac{18}{25}$ From equation (i) $x = \frac{3}{2} \times \frac{20}{3}$ 109. Four fifths of a number is 12 more than three fourths of the number. Find the number. x = 10(a) 120 (b) 160 Calculate the positive number which when 112. (c) 200 (d) 240 added by 15 is equal to 100 times the reciprocal RRB NTPC 30.12.2020 (Shift-II) Stage Ist of the number. **Ans. (d) :** Let the number = x(a) 10 (b) 20 (c) 5 (d) 15 According to the question, RRB NTPC 15.02.2021 (Shift-II) Stage Ist $\frac{4}{5}x - \frac{3}{4}x = 12$ Ans. (c) : Let the positive number is x According to the question, $\frac{16x - 15x}{20} = 12$ $x + 15 = \frac{1}{x} \times 100$ x = 240 $x^2 + 15x = 100$ Hence the number is 240. $x^2 + 15x - 100 = 0$ 110. If $\frac{1}{5}$ of a number multiplied by $\frac{2}{3}$ of the same $x^{2} + 20x - 5x - 100 = 0$ x(x+20)-5(x+20)=0number gives 480, then the number is? (a) 60 (b) 70 (x+20)(x-5)=0(c) 80 (d) 100 $\mathbf{x} = 5$ RRB NTPC 10.01.2021 (Shift-II) Stage Ist Hence the number is 5. Ans. (a) : Let the number be x According to the question-113. A number consists of 3 digits whose sum is 18 and $\mathbf{x} \times \frac{1}{5} \times \mathbf{x} \times \frac{2}{3} = 480$ the middle digit is equal to the sum of other two. If the number increased by 297 when its digits are reversed, then what is the number? $\frac{2x^2}{15} = 480$ (a) 585 (b) 495 (c) 396 (d) 486 RRB NTPC 01.02.2021 (Shift-I) Stage Ist $x^2 = 240 \times 15$ $x^2 = 3600$ Ans. (c) : Let the digits of number are x, y and z respectively. x = 60Given, 111. One-fourth of a number is equal to threex + y + z = 18 _____(i) eighth of another number. If 30 is added to the And, y = x + zOn putting the value of y in equation (i), first number, then it becomes six times that of the second number. The first number is: $\mathbf{x} + \mathbf{x} + \mathbf{z} + \mathbf{z} = 18$ 2x + 2z = 18(a) 12 (b) 20 (c) 10 (d) 15 x + z = 9_(ii) RRB NTPC 13.01.2021 (Shift-II) Stage Ist According to the question, 100x + 10y + z + 297 = 100z + 10y + xAns. (c) : Let the first number is x and the second 99x + 297 = 99znumber is y then, x + 3 = z (iii) On putting the value of z in equation (ii), According to the question, $\frac{x}{4} = \frac{3}{8}y$ x + x + 3 = 92x = 6 $x = \frac{3}{2}y$... (i) x = 3On putting the value of x in equation (ii), x + 30 = 6y ... (ii) x + z = 9And 3 + z = 9Substituting the value of x from equation (i) in equation z = 6(ii)-From equation (i). $\frac{3}{2}y + 30 = 6y$ y = x + zy = 3 + 6 $\tilde{y} = 9$ $\frac{3}{2}y - 6y = -30$ Hence, the number will be 396.

square, we get 812. Find the number, (a) 25 (b) 23 (c) 27 (c) 29 RB NTPC 01.02.2021 (Shift-1) Stage 1st Ans. (d) 1: Let the number be x and square of number x^2 According to the question, $x^2 - x - 812$ $x^2 - x - 812 - 0$ $x^2 - 29 + 28(x - 29) = 0$ (x - 29)(x + 28) = 0 x - 29 = 0 x - 217, find the number is a $(2 - 12 - 12)x - 12 - 12x - 280118. A number when reduced by 22 \frac{1}{2}% becomes217$, find the number is a $(2 - 12 - 12)x - 217 - 12 - 12x - 217 - 12 - 12 - 12x - 217 - 12 - 12 - 12 - 12 - 12 - 12 - 1$	114. If a positive 1	number is subtracted from its	Ans.	(b) : Let the number $= x$
(a) 25 (b) 23 (c) 27 (d) 29 RRB NTPC 01.02.2021 (Shift-1) Stage Ist Ars. (d) 1: Let the number be x and square of number $-x^2$ According to the question, $x^2 - x - 812 = 0$ $x^2 - 29y + 28x - 812 = 0$ x(x - 29) + 28(x - 29) = 0 (x - 29)(x + 28) = 0 x - 29 - 0 x - 29 - 0 x - 29 - 0 x - 29 - 0 RRB NTPC 01.02.2021 (Shift-1) Stage Ist Ans. (d) 1: Let the number. (a) 25 RRB NTPC 01.02.2021 (Shift-1) Stage Ist Ans. (d) 1: Let the 4 consecutive odd numbers is x, x + 2, x + 4, x + 6 According to the question, (x) + (x - 2) - (x + 4) + (x + 6) = 160 4x = 148 $x = \frac{148}{x}$ x = 37 Hence, the smallest number (x) = 37 I16. There are two numbers with the difference of ther squares is 56. What are those numbers? (a) 2, 5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-1) Stage Ist Ans. (a) 1: Let the rounnebres be x and y respectively. According to the question, $x = \frac{30}{100} + 38 = 50$ I17. The sum of half, one-third and one-fifth of a number sceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 12.02.2021 (Shift-1) Stage Ist Ans. (d) 1: Let the number $x = x$ $x = \frac{1200}{-40}$ Hence , number $x = x$ and y x = 9, y = -5 I17. The sum of half, one-third and one-fifth of a number sceeds the number be y 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 12.02.2021 (Shift-1) Stage Ist Ans. (d) 1: Let the numbers are x and y x = y = 20 (i) x = -202 (i) x = -202 (i) x = -202 I18. A number when reduced by 22 $\frac{1}{2}$ whecomes $x = \frac{1}{20}$ $\frac{1}{2}$ where $x = 120$ I17. The sum of half, one-third and one-fifth of a number sceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122. RRB NTPC 10.02.2021 (Shift-1) Stage Ist Ans. (d) 1: Let the numbers are x and y x = y = 20 (i) x = -12, y = 8	square, we get a	812. Find the number.	Acco	ording to the question,
$ \begin{array}{c} (2 \ 27 \ (d) \ 29 \ RB NTPC 01.02.2021 (Shift-1) Stage Ist and square of number x^2According to the question,x^2 - x - 812x^2 - x - 812 - 0x^2 - 29 + 28x - 812 = 0x^2 - 29 + 28x - 812 = 0x^2 - 29 + 28x - 812 = 0x - 29 - 0x + 2 - 1604x - 148x - \frac{143}{4}x - \frac{37}{10}Hence, the smallest number (x) = 37$ Hence, the smallest number (x) = 37 Hence, the smallest number (x) = 37 Hence, the two numbers with the difference of their x quares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (b) 3, 17 (d) 23, -9 $x \times 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ x = 1200 = 40 Hence, number (x) - 40 $x - y^2 = 80$	(a) 25	(b) 23		r(1, 1, 1) $r 12$
RRB NTPC 01.02.2021 (Shift-1) Stage IstAns. (a): I act the number be xand square of number $-x^2$ According to the question, $x^2 - 29x + 28x - 812 = 0$ $x^2 - 29x + 28x - 812 = 0$ $x(x - 29) + 28(x - 29) = 0$ $(x - 29) + 28(x - 29) = 0$ $(x - 29) + 28(x - 29) = 0$ $(x - 29) + 28(x - 29) = 0$ $(x - 29) + 28(x - 29) = 0$ $x - 29$ 115. The sum of 4 consecutive odd numbers is 160.Find the smallest number.(a) 27(b) 37(c) 35(d) 25 RBB NTPC 01.02.021 (Shift-1) Stage IstAccording to the question, $(x) + (x + 2) + (x + 4) + (x + 6) = 160$ $4x + 12 = 160$ $4x = 148$ $x = \frac{148}{4}$ $x = \frac{148}{4}$ $x = 37$ Hence, the smallest number $(x) = 37$ 116. There are two numbers with the difference of their squares is 56. What are those numbers?(a) $9, -5$ (b) $2, 17$ $(a) 3, 17$ $(b) 2, 2, 2021 (Shift-1) Stage IstAns. (a): 1 Let the von numbers be x and y respectively.According to the question,x - y^2 = 56(a) 3x^2 - y^2 = 56(a) 3x^2 - y^2 = 56(b) 2, 1, 7(c) 1, 9(b) 12, 7(c) 144(b) 320(c) 444(b) 320(c) 444(b) 320(c) 444(b) 346(c) 444(b) 346(c) 444(b) 320(c) 444$	(c) 27	(d) 29		$x\left(\frac{-+-+-+-}{2}\right) - x = 12$
Ans. (d) : Let the number be x and square of number x^{3} According to the question, $x^{2} - x = 812$ $x^{2} - 29x + 28x - 812 = 0$ $x^{2} - 29x + 28x - 812 = 0$ x(x - 29) + 28(x - 29) = 0 (x - 29)(x + 28) = 0 x - 29 = 0 x - 21 = 100 = 21 x - 210 = 0 x + 210 = 100 x + 210 = 0 $x + 30 = 100 \times 12$ $x + 30 = 100 \times 12$ x - 30 = 40 x = 1200 = 10 (x - 1)(x - 1)(x + 1) Stage Ist x = 9, y = -5 117. The sum of balf, one-third and one-fifth of a number exceeds the numbers by 12. What is the number? (x) 144 (b) 360 (x - 4)(x + y) = 80 From equation (i) and (ii), $x = -12, y = 8$	RRB NT	PC 01.02.2021 (Shift-I) Stage Ist		31x 12
and square of number x^2 According to the question, $x^2 - x - 812 = 0$ $x^2 - 29x + 28x - 812 = 0$ x(x - 29) + 28(x - 29) = 0 (x - 10) + 12(x - 10) = 10 (x - 10) + 12(x - 10) = 10 (x - 3) + 10(x - 10) = 12(x - 10)	Ans. (d) : Let the num	ber be x		$\frac{1}{30} - x = 12$
According to the question, $x^2 - x = 812$ $x^2 - x = 812 = 0$ $x^2 - 29x + 28x - 812 = 0$ x(x - 29) + 28(x - 29) = 0 (x - 29)(x + 28) = 0 x - 29 = 0 118. A number when reduced by $22\frac{1}{2}$ % becomes x - 29 = 0 117. The sum of 4 consecutive odd numbers is 160. Find the smallest number. (a) 27 (b) 37 (c) 35 (d) 25 REB NTPC 01.02.2021 (Shift-1) Stage Ist According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 4x + 12 = 160 4x = 148 $x = \frac{148}{4}$ x = 37 116. There are two numbers with the difference of 14 between them and the difference of 15. The sum of two numbers be x and y respectively. According to the question, x - y = 14. x = 37 Thence, the smallest number $(x) = 37$ 116. There are two numbers with the difference of 14 between them and the difference of 15. 5 (b) 13. 7 (c) 3, 17 (d) 23, -9 REB NTPC 2.02.0201 (Shift-1) Stage Ist Ans. (d) 1: Let the numbers is 20 and the anumber exceeds the number by 12. What is the number $x - y = 4$ (a) 144 (b) 360 (c) 444 (d) 122 RB NTPC 10.02.2021 (Shift-1) Stage Ist Ans. (d) 1: Let the numbers are x and y According to the question, $x^+ y^- 20$ (i) From equation (i) and (i)), $x - y^- 4$ (ii) From equation (i) and (ii), $x - y^- 4$ (iii) From equation (i) and (ii), $x - y^- 4$ (iii) From equation (i) and (ii), $x - y^- 4$ (iii) From equation (i) and (ii), $x - y^- 4$ (iii)	and square of number	$= x^2$		X 12
$ \begin{aligned} x^{2} - x = 812 \\ x^{2} - x - 812 = 0 \\ x^{2} - 29x + 28x - 812 = 0 \\ x(x - 29) + 28(x - 29) = 0 \\ (x - 29)(x + 28) = 0 \\ x - 29 \end{bmatrix} $ 115. The sum of 4 consecutive odd numbers is 160. Find the smallest number. (a) 27 (b) 37 (c) 35 (d) 25 \\ REB NTPC 01.02.2021 (Shift-1) Stage Ist x, x + 2, x + 4, x + 6 \\ According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 \\ 4x + 12 - 160 \\ 4x + 12 - 160 \\ 4x = 148 \\ x = \frac{148}{4} \\ x = \frac{1200}{3} + 38 = 50 \\ 119. When 38 is added to 30% of a number. The result is 50. What is the number? (a) 20 (b) 80 (c) 60 (d) 40 \\ x > 100 + 128 \\ (a) 30 - 51 (b) 2.16 (c) 3.17 (d) 23, -9 \\ RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. And x^{2} - y^{2} = 5 \\ 117. The sum of half, one-third and one-fifth of a number receation (i) and equation (ii), x = 9, y = -5 \\ 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the numbers is 20 and the number? (b) = 13, 7 (c) 11, 9 (d) 12, 8 \\ RB NTPC 15.02.2021 (Shift-I) Stage Ist number? (b) = 10, 12, 9 (c) 12, 8 \\ RB NTPC 15.02.2021 (Shift-I) Stage Ist number? (c) 444 (c) 122 \\ RB NTPC 10.02.2021 (Shift-I) Stage Ist number? (c) 444 (c) 122 \\ RB NTPC 10.02.2021 (Shift-I) Stage Ist number? (c) 444 (c) 122 \\ RB NTPC 10.02.2021 (Shift-I) Stage Ist number? (c) 444 (c) 122 \\ RB NTPC 10.02.2021 (Shift-I) Stage Ist number? (c) 444 (c) 122 \\ RB NTPC 10.02.2021 (Shift-I) Stage Ist number? (c) 44 \\ (c) 4122 \\ (c) 444 \\ (c) 4124 \\ (c) 4124 \\	According to the quest	tion,		$\frac{1}{30} = 12$
$ \begin{array}{c} x^2 - x - 812 = 0 \\ x^2 - 29x + 28x - 812 = 0 \\ x(x - 29) + 28(x - 29) = 0 \\ (x - 29)(x + 28) = 0 \\ (x - 29)(x + 28) = 0 \\ x = 29 \end{array} $ 115. The sum of 4 consecutive odd numbers is 160. Find the smallest number. (a) 27 (b) 37 (c) 35 (d) 25 RRB NTPC 01.0.22021 (Shift-I) Stage Ist Ans. (b) 1 Let the 4 consecutive odd numbers is 160. $x(100\% - 22\frac{1}{2}\%) = 217$ (c) 35 (d) 25 RRB NTPC 01.0.22021 (Shift-I) Stage Ist According to the question, $x(100\% - 22\frac{1}{2}\%) = 217$ (a) 27 (b) 37 (c) 35 (c) 1 Let the number is $x + 2x + 4x + x + 5x + 4x + x + 6x + 12 = 160$ 4x + 12 = 160 4x - 148 $x = \frac{148}{4}$ x = 37 Hence, the smallest number $(x) = 37$ 116. There are two numbers? (a) 9, -5 (b) 2, 16 (b) 3, 17 (d) 23, -9 RRB NTPC 23.02.2021 (Shift-I) Stage Ist Ans. (a): Let the two numbers be x and y respectively. And $x^2 - y^2 = 56$ (ii) Ans. (a): Let the sum of half, one-third and one-fifth of a number $x + y = 20$ (i) x + y(x - y) = 55(iii) x - y = 14(iii) From equation (i) and equation (ii), $x = 9$, $y = -5$ 117. The sum of half, one-third and one-fifth of a number $x = 30$ (a) $x + y^2 = 20$ (i) $x^2 - 9x - 5$ (a) 144 (b) 360 (c) 444 (c) 4122 RRB NTPC 10.02.2021 (Shift-I) Stage Ist Ans. (a) 144 (b) 360 (c) 444 (c) 4122 RRB NTPC 10.02.2021 (Shift-I) Stage Ist RRB NTPC 15.02.2021 (Shift-I) Stage Ist RRB NTPC 10.02.2021 (Shift-I) Stage Ist RRB NTPC 10.01.2021 RRB NTPC 10.01.2021 RRB NTPC 10.01.2021 RRB N	$x^2 - x = 812$			x = 360
$ \begin{aligned} x^2 - 29x + 28x - 812 = 0 \\ x(x - 29) + 28(x - 29) = 0 \\ (x - 29)(x + 28) = 0 \\ x - 29 \end{bmatrix} $ 115. The sum of 4 consecutive odd numbers is 160. Find the smallest number. (a) 27 (b) 37 (c) 35 (d) 25 (b) 7 (c) 35 (c) 25 (c) 7 (c	$x^2 - x - 812 =$	= 0	118	A number when reduced by $22\frac{1}{2}\%$ becomes
$ \begin{array}{c} x(x-29) + 28(x-29) = 0 \\ (x-29)(x+28) = 0 \\ x-29 = 0 \\ x=29 \end{array} \\ \hline \\ \begin{array}{c} x=29 \end{array} \\ \hline \\ \begin{array}{c} 115. The sum of 4 consecutive odd numbers is 160. \\ \hline Find the smallest number. \\ (a) 27 (b) 37 \\ (c) 35 (d) 25 \\ \hline \\ \hline \\ RRB NTPC 01.02.2021 (Shift-1) Stage 1st \\ \hline \\ According to the question, \\ (x) + (x+2) + (x+4) + (x+6) = 160 \\ 4x = 148 \\ x = 37 \\ \hline \\ \hline \\ Hence, the smallest number (x) = 37 \\ \hline \\ \hline \\ 116. There are two numbers with the difference of their squares is 56. What are those numbers? \\ (a) 9, -5 (b) 2, 16 \\ (c) 3, 17 (d) 23, -9 \\ \hline \\ RRB NTPC 22.02.2021 (Shift-1) Stage 1st \\ \hline \\ Ans. (a) : Let the two numbers be x and y respectively. \\ According to the question, \\ (x + y(x - y) = 56 \dots (ii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x - y) = 56 \dots (iii) \\ (x + y)(x + y) = 56 \dots (iii) \\ (x + y)(x + y) = 56 \dots (iii) \\ (x + y)(x + y) = 56 \dots (iii) \\ (x + y)(x + y) = 80 \\ \hline \\ \hline $	$x^2 - 29x + 28$	x - 812 = 0	110.	$\frac{1}{2}$
$ \begin{array}{c} (x-29)(x+28)=0 \\ x-29=0 \\ x-29 = 0 \\ x=29 \end{array} $ 115. The sum of 4 consecutive odd numbers is 100. Find the smallest number. (a) 27 (b) 37 (c) 35 (d) 25 RRB NTPC 01.02.2021 (Shift-I) Stage Ist Ans. (b) : Let the 4 consecutive odd numbers is $x, x+2, x+4, x+6$ According to the question, $(x)+(x+2)+(x+4)+(x+6)=160 \\ 4x+12=160 \\ 4x+12=160 \\ 4x=148 \\ x=37 \end{array}$ Hence, the smallest number $(x)=37$ 116. There are two numbers with the difference of 14 between them and the difference of 14 between them stalts numbers $(x)=37$ 116. There are two numbers with the difference of 14 between them and the difference of 14 between them and the difference of 14 between them stalt of 202.202.2021 (Shift-1) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, $x \times \frac{30}{100} = 50 - 38 = 12 \\ x \times 30 = 100 \times 12 \\ x = \frac{300}{30} = 40 \\ Hence, number (x) = 40 \\ 120. The sum of two numbers is 20 and the numbers from the given alternatives. (a) 15, 5 (b) 13, 7 (c) 11, 9 (d) 12, 8 \\ x = 9, y = -5 \\ 117. The sum of half, one-third and one-fifth of a number? (b) 360 \\ (c) 6444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist number? (b) 360 \\ (c) 444 (c) 122 \\ REB NTPC 10.02.2021 (Shift-II) Stage Ist numbe$	x(x-29)+2	8(x-29)=0		(a) 315 (b) 212
$ \begin{array}{c} x - 29 = 0 \\ x = 29 \end{array} \\ \hline RRB NTPC 23.2.2020 (Shift-II) Stage Ist \\ ns. (c) : Let the number is x \\ According to the smallest number. (a) 27 (b) 37 \\ (c) 35 (d) 25 \\ \hline RRB NTPC 01.02.2021 (Shift-I) Stage Ist \\ \hline Ans. (b) : Let the 4 consecutive odd numbers is x, x + 2, x + 4, x + 6 \\ According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 \\ 4x + 124 = 160 \\ 4x + 124 = 160 \\ 4x = 148 \\ x = 37 \\ \hline Hence, the smallest number (x) = 37 \\ \hline 116 There are two numbers with the difference of 14 between them and the difference of the question, (a) 9.5 (b) 2, 16 \\ (c) 3, 17 (d) 23, -9 \\ RRB NTPC 22.02.2012 (Shift-I) Stage Ist \\ \hline Ans. (a) : Let the two numbers be x and y respectively. According to the question (ii), (x + y)(x - y) = 56 \\ number? \\ (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ RRB NTPC 10.02.2021 (Shift-II) Stage Ist \\ \hline Ans. (a) : Let the number by 12. What is the number? \\ (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ RRB NTPC 10.02.2021 (Shift-II) Stage Ist \\ \hline Ans. (a) : Let the two numbers by 12. What is the number? \\ (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ RRB NTPC 10.02.2021 (Shift-II) Stage Ist \\ \hline Ans. (a) : Let the number by 12. What is the number? \\ (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ RRB NTPC 10.02.2021 (Shift-II) Stage Ist \\ \hline Ans. (a) : Let the number by 12. What is the number? \\ (a) 144 (b) 360 \\ (c) 444 (d) 122 \\ RRB NTPC 10.02.2021 (Shift-II) Stage Ist \\ \hline Ans. (a) : Let the number by 12. What is the number? \\ \hline Ans. (b) : Let the number sare x and y \\ According to the question, \\ x - y = 4 \\ (b) : (c) = 44 \\ (c) = 144 \\ (c) = 36 \\ \hline Ans. (c) : Let the number sare x and y \\ According to the question, \\ x - y = 4 \\ (c) = 11, 9 \\ \hline Ans. (c) : Let the numbers are x and y \\ According to the question, \\ x - y = 8 \\ \hline Ans. (b) : Let the number sare x and y \\ According to the question, \\ x - y = 4 \\ (c) = 11, 9 \\ \hline Ans. (c) : Let the number sare x and y \\ According to the question, \\ x - y = 4 \\ (c) = 11, 9 \\ \hline Ans. (c) : Let the number sare x and y \\ According to the question, \\ x - y = 4 \\ (c) = 11,$	(x-29)(x+2)	(28) = 0		(c) 280 (d) 420
x = 29Ans. (c) : Let the number is x According to the question,(a) 27(b) 37 (c) 35(c) 35(c) 27RRB NTPC 01.02.2021 (Shift-I) Stage IstAns. (b) : Let the 4 consecutive odd numbers is x, x+2, x+4, x+6According to the question,(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 4x = 148(x) + (x + 2) + (x + 4) + (x + 6) = 160 (x + 10) = 237Hence, the smallest number (x) = 37Hence, the smallest number (x) = 37III. There are two numbers with the difference of (x) + 380 = 50 - 38 = 12 (x) + 38 = 50Ans. (a) : Let the numbers are x and y x = 10, 20 = 20Ans. (a) : Let the numbers are x and y <br< th=""><th>x - 29 = 0</th><th></th><th></th><th>RRB NTPC 29.12.2020 (Shift-II) Stage Ist</th></br<>	x - 29 = 0			RRB NTPC 29.12.2020 (Shift-II) Stage Ist
115. The sum of 4 consecutive odd numbers is 160. Find the smallest number. (a) 27 (b) 37 (c) 35 (d) 25 RRB NTPC 01.02.2021 (Shift-I) Stage Ist According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 4x + 12 = 160 4x + 12 = 160 4x = 148 x = $\frac{148}{4}$ (a) 20 (b) 80 (c) 60 (d) 40 RRB NTPC 23.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the numbers with the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, x + y = 4(ii) Ans. (a) : Let the two numbers be x and y respectively. According to the question, (x + y)(x - y) = 56(ii) (x + y)(x - y) = 56(ii) From equation (i) and equation (iii), x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number ? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-I) Stage Ist Ans. WITPC 10.02.2021 (Shift-II) Stage Ist	x = 29		Ans. Acco	(c) : Let the number is x ording to the question,
Find the smallest number. (a) 27 (b) 37 (c) 35 (c) 25 RRB NTPC 01.02.2021 (Shift-I) Stage Ist Ans. (b) : Let the 4 consecutive odd numbers is x, x + 2, x + 4, x + 6 According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 4x + 12 = 160 4x + 12 = 160 4x = 148 $x = \frac{148}{4}$ x = 37 Hence, the smallest number (x) = 37 116. There are two numbers with the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the vonumbers be x and y respectively. According to the question, $x \times \frac{30}{100} = 50 - 38 = 12$ $x \times 30 = 100 \times 12$ $x \approx 30 = 100 \times 12$ $x \approx 30 = 100 \times 12$ $x = \frac{1200}{30} = 40$ Hence, number (x) = 40 120. The sum of two numbers is 20 and the difference of their squares is 80. Select both the numbers? from the given alternatives. (a) 15, 5 (b) 13, 7 (c) 11, 9 (d) 12, 8 RB NTPC 15.02.2021 (Shift-I) Stage Ist Ans. (d) : Let the number s are x and y x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-I) Stage Ist From equation (i) (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i) RB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i) x - y = 4(ii) From equation (i) x - y = 4(ii) From equation (i) KB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i) x - y = 4(ii) From equation (i) x - y = 4(ii) From equation (i) KB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i) From equation (i) KB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i) KB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i) KB NTPC 10.02.2021 (Shift-II) St	115. The sum of 4 c	consecutive odd numbers is 160.		$(1000(-22^{1}))$ 217
(a) 27 (b) 37 (c) 35 (d) 25 RRB NTPC 01.02.2021 (Shift-1) Stage Ist Ans. (b) : Let the 4 consecutive odd numbers is x, x+2, x+4, x+6 According to the question, (x) + (x+2) + (x+4) + (x+6) = 160 4x + 12 = 160 4x + 12 = 160 4x + 148 $x = \frac{148}{4}$ x = 37 Hence, the smallest number (x) = 37 Hence, the sum on unbers with the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-1) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. And x ² - y ² = 56(ii) (x + y)(x - y) = 56(iii) (x + y)(x - y) = 80 From equation (i) and equation (iii), x - y = 4 (ii) From equation (i), (a) 144 (b) 360 (c) 444 (d) 122 RB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i), x - y = 4 (ii) From equation (i) x - y = 4 (iii) From equation (i) and (ii), x = 12, y = 8	Find the smalle	est number.		$x \left(\frac{100\% - 22}{2} \frac{100\%}{2} \right) = 217$
Image: NTPC 01.02.2021 (Shift-1) Stage 1stARB NTPC 01.02.2021 (Shift-1) Stage 1stAns. (b) : Let the 4 consecutive odd numbers is $x, x + 2, x + 4, x + 6$ According to the question, $(x) + (x + 2) + (x + 4) + (x + 6) = 160$ $4x + 12 = 160$ $4x + 148$ $x = 37$ Hence, the smallest number (x) = 37TI16. There are two numbers with the difference of their squares is 56. What are those numbers? $(a) 9, -5$ $(b) 2, 16$ $(c) 3, 17$ $(d) 23, -9$ RRB NTPC 22.02.12 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively.According to the question, $x + y = 4$ $x = 9, y = -5$ IT. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the numbers are x and y $x - y^2 = 80$ IRB NTPC 15.02.2021 (Shift-II) Stage IstRB NTPC 15.02.2021 (Shift-II) Stage Ist(a) 144(b) 360 $(c) 444$ $(d) 122$ RB NTPC 15.02.2021 (Shift-II) Stage Ist(a) 144(b) 360 $(c) 444$ $(d$	(a) 27 (a) 25	(b) 37 (d) 25		$x \times 77 - \frac{1}{96} = 217$
Ans. (b) : Let the 4 consecutive odd numbers is x, x+2, x + 4, x + 6 According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 4x + 12 = 160 4x + 12 = 160 4x = 148 x = $\frac{148}{4}$ x = 37 Hence, the smallest number (x) = 37 116. There are two numbers with the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, x - y = 14(ii) Ans. x - y = 4(iii) From equation (i) and equation (iii), x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number exceeds the number y 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist RRB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i), and equation (iii), x - y = 4(ii) From equation (i), and (ii), x - y = 4(ii) RRB NTPC 10.02.2021 (Shift-II) Stage Ist Ans. (a) 124 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i), x - y = 4(ii) From equation (i), x - y = 8	(C) 55 DDR NT	(u) 23 CPC 01 02 2021 (Shift I) Staga Ist		2^{10}
And s. (a): Let the two numbers with the difference of the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 4x + 12 = 160 4x = 148 x = $\frac{148}{4}$ x = 37 Hence, the smallest number (x) = 37 116. There are two numbers with the difference of their squares is 56. What are those number? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, x - y = 14(i) And x ² - y ² = 56(ii) (x + y)(x - y) = 56(iii) From equation (i) and equation (iii), x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist RRB NTPC 10.02.2021	$\frac{\mathbf{Ans}(\mathbf{b}) \cdot \mathbf{I} \text{ of the } \mathbf{Ans}}{\mathbf{Ans}(\mathbf{b}) \cdot \mathbf{I} \text{ of the } \mathbf{Ans}}$	necoutive add numbers is		$\mathbf{x} = \frac{217 \times 100 \times 2}{100 \times 2}$
According to the question, (x) + (x + 2) + (x + 4) + (x + 6) = 160 4x + 12 = 160 4x + 12 = 160 4x = 148 x = 37 Hence, the smallest number (x) = 37 116. There are two numbers with the difference of 14 between them and the difference of 15. There are two numbers by 2. What is the function the question, (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, x - y = 14(ii) And x ² - y ² = 56(iii) (x + y)(x - y) = 56(iii) x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist RB NTPC 10.02.2021 (Shift-II) Stage Ist RB NTPC 10.02.2021 (Shift-II) Stage Ist RB NTPC 10.02.2021 (Shift-II) Stage Ist From equation (i), x - y = 4(ii) From equation (i), x - y = 4(Ans. (b) . Let the 4 co x + 2 + 4	x + 6		155
119. When 38 is added to 30% of a number. The result is 50. What is the number? (a) $4x + 12 = 160$ 4x = 148 $x = \frac{148}{4}$ x = 37 Hence, the smallest number $(x) = 37$ 116. There are two numbers with the difference of 14 between them and the difference of their squares is 56. What are those number? (a) $9, -5$ (b) $2, 16$ (c) $3, 17$ (d) $23, -9$ RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, x - y = 14(i) And $x^2 - y^2 = 56$ (ii) x + y(x - y) = 56(iii) x - y = 14(iii) x - y = 14(iii) x - y = 14(iii) x + y = 2(iii) x - y = 14(iii) x - y = 14(iii) x - y = 14(iii) x - y = 5 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the numbers? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-I) Stage Ist RRB NTPC 10.02.2021 (Shift-II) Stage Ist RRB NTPC 10.02.2021 (Shift-II) Stage Ist Ans. (d) : Let the numbers are x and y x - y = 4(ii) x - y = 4(ii) x - y = 4(ii) From equation (i) and equation (iii), x - y = 4(ii) From equation (i), x - y = 8	According to the quest	tion	\therefore	x = 280
$\begin{array}{c} \text{result is 50. What is the number?}\\ 4x + 12 = 160\\ 4x = 148\\ x = 148\\ x = \frac{148}{4}\\ x = 37\\ \text{Hence, the smallest number (x) = 37\\ \textbf{16. There are two numbers with the difference of their squares is 56. What are those numbers?\\ (a) 9, -5 (b) 2, 16\\ (c) 3, 17 (d) 23, -9\\ \textbf{RRB NTPC 22.02.2021 (Shift-I) Stage Ist}\\ \textbf{Ans. (a) : Let the two numbers be x and y respectively.}\\ According to the question, x - y = 14(i)\\ And x^2 - y^2 = 56(fi)\\ (x + y)(x - y) = 56(From, x^2 - y^2 = (x + y) (x - y)]\\ x + y = 4(ii)\\ respectively.\\ x + y = 4(iii)\\ x = 9, y = -5\\ \textbf{17. The sum of half, one-third and one-fifth of a number? (i) and equation (iii), x = 9, y = -5\\ \textbf{17. The sum of half, one-third and one-fifth of a number? (i) and (44 (b) 360 (c) 444 (d) 122\\ \textbf{RRB NTPC 10.02.2021 (Shift-II) Stage Ist}\\ RRB NTPC 10.02.2021 (Shift-II) Stage$	(x) + (x + 2) +	(x + 4) + (x + 6) = 160	119.	When 38 is added to 30% of a number. The
$\begin{array}{c} \text{(a)} 20 & \text{(b)} 80 \\ \text{(c)} 60 & \text{(c)} 40 \\ \text{(c)} 80 \\ \text{(c)} 60 & \text{(c)} 40 \\ \text{(c)} 80 \\ \text{(c)} 60 & \text{(c)} 40 \\ \text{(c)} 80 \\ \text{(c)} 60 & \text{(c)} 80 \\ \text{(c)} 60 & \text{(c)} 40 \\ \text{(c)} 80 \\ \text{(c)} 80 \\ \text{(c)} 60 & \text{(c)} 80 \\ \text{(c)} 60 & \text{(c)} 80 \\ \text{(c)} 80 \\$	4x + 12 = 160	$(\mathbf{x} + \mathbf{y}) \cdot (\mathbf{x} + \mathbf{y}) = 100$		result is 50. What is the number? (a) 20 (b) 80
(a) $4\frac{148}{4}$ $x = 37$ Hence, the smallest number $(x) = 37$ 116. There are two numbers with the difference of 14 between them and the difference of their squares is 56. What are those numbers? (a) $9, -5$ (b) $2, 16$ (c) $3, 17$ (d) $23, -9$ RRB NTPC 22.02.0201 (Shift-I) Stage IstAns. (a) : Let the two numbers be x and y respectively. According to the question, $x - y = 14$	4x = 148	~		$\begin{array}{c} (a) \ 20 \\ (c) \ 60 \\ (d) \ 40 \\ \end{array}$
$x = \frac{1}{4}$ $x = 37$ Hence, the smallest number (x) = 37116. There are two numbers with the difference of 14 between them and the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (d) : Let the number $= x$ According to the question, $x \times \frac{30}{100} + 38 = 50$ Ans. (a) : Let the two numbers be x and y respectively. According to the question, $x - y = 14$ (i) And $x^2 - y^2 = 56$ (ii) $(x + y)(x - y) = 56$ (iii) From equation (i) and equation (iii), $x = 9, y = -5$ Ans. (d) : Let the numbers is 20 and the difference of their squares is 80. Select both the numbers from the given alternatives. (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage IstAns. (d) : Let the number $x = 20$ $x + y = 20$ $(x - y) (x + y) = 80$ From equation (i), $x - y = 4$ $(x - y) (x + y) = 80$ From equation (i), $x - y = 4$ $(x - y) (x + y) = 80$ From equation (i) and (ii), $(x - y = 4)$ $(x - y) (x + y) = 80$ From equation (i) and (ii), $(x - y = 4)$ $(x - y) (x + y) = 80$ From equation (i) and (ii), $(x - y = 4)$ $(x - y = 4)$ $(x - y) (x + y) = 80$	148			RRB NTPC 23.02.2021 (Shift-I) Stage Ist
x = 37Hence, the smallest number $(x) = 37$ 116. There are two numbers with the difference of 14 between them and the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist According to the question, $x \times 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ $x = 30 = 40$ Hence, number $(x) = 40$ Ans. (a) : Let the two numbers be x and y respectively. According to the question, $x - y = 14$ (ii) And $x^2 - y^2 = 56$ (iii) $(x + y)(x - y) = 56$ [From, $x^2 - y^2 = (x + y) (x - y]$ $x + y = 4$ (iii) From equation (i) and equation (iii), $x = 9, y = -5$ Ans. (d) : Let the numbers are x and y According to the question, $(x + y)(x - y) = 56$ (iii) From equation (i) and equation (iii), $x = 9, y = -5$ RRB NTPC 15.02.2021 (Shift-I) Stage IstI17. The sum of half, one-third and one-fifth of a number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage IstAns. (d) : Let the numbers are x and y According to the question, $x - y = 4$ (ii) From equation (i) and (ii), $x - y = 4$ (iii)RB NTPC 10.02.2021 (Shift-II) Stage IstFrom equation (i) and (ii), $\therefore x = 12, y = 8$	x =		Ans.	(d) : Let the number = x
Hence, the smallest number $(x) = 37$ 116. There are two numbers with the difference of 14 between them and the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.021 (Shift-I) Stage Ist $x \times \frac{30}{100} = 50 - 38 = 12$ $x \times 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ $x = \frac{1200}{30} = 40$ Hence, number $(x) = 40$ Ans. (a) : Let the two numbers be x and y respectively. According to the question, $x - y = 14$	x = 37		Acco	ording to the question,
Intervalue of the second sec	Hence, the smallest nu	umber $(x) = 37$		$x \times \frac{30}{30} + 38 = 50$
14 between them and the difference of their squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist $x \times \frac{30}{100} = 50 - 38 = 12$ $x \times 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ $x \times 30 = 40$ Ans. (a) : Let the two numbers be x and y respectively. According to the question, $x - y = 14$ (i) And $x^2 - y^2 = 56$ (ii) $(x + y)(x - y) = 56$ (From, $x^2 - y^2 = (x + y) (x - y]$ $x + y = 4$ (iii) From equation (i) and equation (iii), $x = 9, y = -5$ RRB NTPC 15.02.2021 (Shift-I) Stage IstI17. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (c) 444Mat is the (c) 444RRB NTPC 10.02.2021 (Shift-II) Stage IstRB NTPC 10.02.2021 (Shift-II) Stage IstFrom equation (i) and (ii), $\therefore x = 12, y = 8$ $x = 30, 30 = 100 \times 12$ $x \times 30 = 100 \times 12$ $x = 12, y = 8$	116. There are two	numbers with the difference of		100 100 100 100
squares is 56. What are those numbers? (a) 9, -5 (b) 2, 16 (c) 3, 17 (d) 23, -9 RRB NTPC 22.02.2021 (Shift-I) Stage Ist Ans. (a) : Let the two numbers be x and y respectively. According to the question, x - y = 14(i) And $x^2 - y^2 = 56$ (iii) $(x + y)(x - y) = 56$ (From, $x^2 - y^2 = (x + y) (x - y]$ x + y = 4(iii) From equation (i) and equation (iii), x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist The sum of half. (Shift-II) Stage Ist 120. The sum of two numbers is 20 and the difference of their squares is 80. Select both the numbers from the given alternatives. (a) 15, 5 (b) 13, 7 (c) 11, 9 (d) 12, 8 RB NTPC 15.02.2021 (Shift-I) Stage Ist Ans. (d) : Let the numbers are x and y According to the question, x + y = 20 (i) $x^2 - y^2 = 80$ (x -y) (x+y) = 80 From equation (i), x - y = 4 (ii) From equation (i), x - y = 4 (ii) From equation (i) and (ii), \therefore $x = 12, y = 8$	14 between th	em and the difference of their		$x \times \frac{30}{3} = 50 - 38 = 12$
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3030Hence, number (x) = 40Ans. (a) : Let the two numbers be x and y respectively.According to the question, $x - y = 14$ (i)10And $x^2 - y^2 = 56$ (ii) $(x + y)(x - y) = 56$ (From, $x^2 - y^2 = (x + y) (x - y)$ 120. The sum of two numbers is 20 and the difference of their squares is 80. Select both the numbers from the given alternatives.(a) 15, 5(b) 13, 7(c) 11, 9(d) 12, 8 RRB NTPC 15.02.2021 (Shift-I) Stage Ist Ans. (d) : Let the numbers are x and y According to the question, $x + y = 20$ (i) $x^2 - y^2 = 80$ $(x - y) (x + y) = 80$ I17. The sum of half, one-third and one-fifth of a number? (a) 144(b) 360 $(x - 444$ (a) 144(b) 360 $(x - y) (x + y) = 80$ From equation (i), $x - y = 4$ (ii)From equation (i), $x - y = 4$ (ii)From equation (i) and (ii), \therefore $x = 12, y = 8$	(c) 3, 17	(d) 23, –9		$x = \frac{1200}{20} = 40$
Ans. (a) : Let the two numbers be x and y respectively. According to the question, $x - y = 14$ (i)Interfect, number $(x) = 40$ And $x^2 - y^2 = 56$ (ii) $(x + y)(x - y) = 56$ (iii) $(x + y)(x - y) = 56$ (iii) From equation (i) and equation (iii), $x = 9, y = -5$ I20. The sum of two numbers is 20 and the difference of their squares is 80. Select both the numbers from the given alternatives. (a) 15, 5 (b) 13, 7 (c) 11, 9 (d) 12, 8 RRB NTPC 15.02.2021 (Shift-I) Stage IstI17. The sum of half, one-third and one-fifth of a number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage IstRB NTPC 10.02.2021 (Shift-II) Stage Ist	RRB NT	TPC 22.02.2021 (Shift-I) Stage Ist	Hone	30
According to the question, x - y = 14(i) And $x^2 - y^2 = 56$ (ii) $(x + y)(x - y) = 56$ [From, $x^2 - y^2 = (x + y) (x - y]$] x + y = 4(iii) From equation (i) and equation (iii), x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist RRB NTPC 10.02.2021 (Shift-II) Stage Ist x - y = 4 (ii) From equation (i) and (ii), x - y = 4 (ii) From equation (i) and (ii), x - y = 4 (ii) From equation (i) and (ii), x - y = 4 (ii) From equation (i) and (ii), x - y = 4 (ii) From equation (i) and (ii), x - y = 4 (ii) (a) 144 (b) 360 (b) 360 (c) 444 (c) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist	Ans. (a) : Let the two	numbers be x and y respectively.	120	The sum of two numbers is 20 and the
	According to the quest	tion,	120.	difference of their squares is 80. Select both the
And $x^2 - y^2 = 56$ [From, $x^2 - y^2 = (x + y) (x - y]$ $(x + y)(x - y) = 56$ [From, $x^2 - y^2 = (x + y) (x - y]$ x + y = 4(iii) From equation (i) and equation (iii), x = 9, y = -5 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist RRB NTPC 10.02.2021 (Shift-II) Stage Ist	x - y = 14(1)	i)		numbers from the given alternatives.
$\begin{aligned} & (x + y)(x - y) = 56 \dots [From, x^{-} - y^{-} = (x + y) (x - y] \\ & x + y = 4 \dots (iii) \\ From equation (i) and equation (iii), \\ & x = 9, y = -5 \end{aligned}$ $\begin{aligned} & (c) 11, 9 & (d) 12, 8 \\ \hline & RRB NTPC 15.02.2021 (Shift-I) Stage Ist \\ \hline & Ans. (d) : Let the numbers are x and y \\ According to the question, \\ & x + y = 20 & \dots (i) \\ & x^{2} - y^{2} = 80 \\ & (x - y) (x + y) = 80 \\ From equation (i), \\ & x - y = 4 & \dots (ii) \\ From equation (i), \\ & x - y = 4 & \dots (ii) \\ From equation (i) and (ii), \\ & & & & & & & & & & & & & & \\ \hline & & & &$	And $x^2 - y^2 = 56$	$\dots \dots \dots (11)$		(a) 15, 5 (b) 13, 7
RKB NTPC 15.02.2021 (Shift-I) Stage IstRKB NTPC 10.02.2021 (Shift-II) Stage IstKKB NTPC 15.02.2021 (Shift-II) Stage Ist	$(x + y)(x - y) = 56 \dots$	[From, $x^2 - y^2 = (x + y) (x - y]$		(c) $11, 9$ (d) $12, 8$
From equation (i) and equation (ii), $x = 9, y = -5$ Ans. (d) : Let the humbers are x and yAccording to the question, $x + y = 20$ (i) $x^2 - y^2 = 80$ (x - y) (x + y) = 80From equation (i), $x - y^2 = 80$ (x - y) (x + y) = 80From equation (i), $x - y = 4$ (ii)From equation (i), $x - y = 4$ (ii)From equation (i), $x - y = 4$ (ii)From equation (i) and (ii), \therefore $x = 12, y = 8$	x + y = 4(11) From equation (i) and	aquation (iii)	Ans	(d) : Let the numbers are x and x
$x - 9, y 5$ 117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 $x + y = 20$ $(x - y) (x + y) = 80$ From equation (i), $x - y = 4$ From equation (i), $x - y = 4$ From equation (i) and (ii), \therefore $x = 12, y = 8$	From equation (1) and $x = 0$ $x = -5$	equation (III),	Ans.	rding to the question
117. The sum of half, one-third and one-fifth of a number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist $\therefore x = 12, y = 8$ $x^2 - y^2 = 80$ (x - y) (x + y) = 80 From equation (i), x - y = 4 (ii) $\therefore x = 12, y = 8$	x - y, y 3			x + y = 20 (i)
number exceeds the number by 12. What is the number? (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist $(x - y) (x+y) = 80$ From equation (i), x - y = 4 (ii) From equation (i) and (ii), $\therefore x = 12, y = 8$	117. The sum of ha	all, one-third and one-fifth of a		$x^2 - y^2 = 80$
Image: From equation (i), (a) 144 (b) 360 (c) 444 (d) 122 RRB NTPC 10.02.2021 (Shift-II) Stage Ist \therefore $x = 12$, $y = 8$	number exceed	is the number by 12. What is the		(x - y) (x + y) = 80
(a) 144 (b) 500 $x - y - 4$ (c) (i) (c) 444 (d) 122 From equation (i) and (ii), RRB NTPC 10.02.2021 (Shift-II) Stage Ist \therefore $x = 12, y = 8$	$\frac{144}{2}$	(b) 360	From	$\frac{1}{2} = \frac{1}{2} $ (ii)
RRB NTPC 10.02.2021 (Shift-II) Stage Ist $\begin{vmatrix} 1 & \text{right of a data of (1) and (1)}, \\ \therefore & x = 12, y = 8 \end{vmatrix}$	(a) 144	(d) 122	From	x = y = 4 (II) equation (i) and (ii)
	RRB NTI	PC 10.02.2021 (Shift-II) Stage Ist		x = 12, y = 8

121. When 40 is subtracted from a number, it	9x - 9y = 63
reduces to its 60%. What is the number?	x - y = 7 (ii)
(a) 130 (b) 160	By adding equation (i) and (ii)
(c) 200 (d) 100	$2x = 18 \Rightarrow x = 9, y = 2$
RRB NTPC 09.02.2021 (Shift-I) Stage 1st	Hence the number = $10x + y - 10 \times 9 + 2 - 92$
Ans. (d) : Let the number be x	The field of the final field $10x + y = 10x + 2 = 32$
According to the question,	125. The sum of the digits of a two digit number is
$x = 40 - x \times \frac{60}{100}$	9. When 27 is added to the number, the place of
$x = 40 = x \wedge \frac{100}{100}$	(a) 45 (b) 36
60x	(a) 43 (b) 30
$x - \frac{100}{100} = 40$	(C) = 10 (C) = 27 (C)
	KKD NIIC 03.04.2010 Shift . I
$\frac{40x}{100} = 40$	Ans: (b) Let the unit digit be x in the two digit number.
100	According to the question, The tens digit = 0 x And the number = $10(0 x) + x$
X = 100	10 (0 - x) + x + 27 - 10x + 0 - x
122. The 5th part of a number when divided by 3	$ \begin{array}{c} 10 (9 - x) + x + 27 - 10x + 9 - x \\ \rightarrow 00 10y + y + 27 - 0y + 0 \end{array} $
yields three times half of tenth part of half of	$\Rightarrow 90 - 10x + x + 27 - 9x + 9$ $\Rightarrow 00 + 27 - 0 - 19x$
80. What is the number: (1) 00	$\Rightarrow 90 + 27 - 9 - 10X$
(a) 60 (b) 90	\Rightarrow 18X = 108
(c) 45 (d) 44 $(d) - 44$	$\mathbf{X} = 6$
RRB NIPC 20.01.2021 (Shift-1) Stage 1st	1 nen, the number =10 (9-x) + x =10 (9 c) + (= 2(
Ans. (b) : Let the number is x	=10(9-6)+6=36
According to the question,	126. The sum of the digits of a two digit number is
$1 \begin{bmatrix} 0 \\ 0 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \end{bmatrix}$	13. If those digits are interchanged, the number
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	gets decreased by 27. Find the changed
$\frac{-3}{3} = \frac{-2}{2} \times 3$	number. (b) 76
5 2	$ \begin{array}{c} (a) & 85 \\ (b) & 7 \\ (c) & 7$
	$(C) 0/ (d) 38$ DDD NTDC 02 04 201(Shift \cdot 1
$\frac{x}{-1} = 40 \times \frac{1}{-1} \times \frac{1}{-1} \times 3$	
15 10 2	Ans: (d) Let the tens digit is x ,
x = 90	The unit digit = $13 - x$. The number = $10 \times x + (12 - x)$
123. If three-fourth of a number is 50 more than its	\therefore The number = 10 × x + (13 - x)
one-third, then find the number.	According to the question, $10 \times (12 \text{ m}) + \text{m} = 10 \times \text{m} + (12 \text{ m}) - 27$
(a) 140 (b) 130	$10 \times (13 - x) + x = 10 \times x + (13 - x) - 27$ 120 10 + x = 10 + 12 x 27
(c) 120 (d) 100	$\frac{150 - 10x + x - 10x + 15 - x - 27}{18 - x - 104}$
RRB NTPC 16.01.2021 (Shift-I) Stage Ist	10 x - 144 y - 9
Ans. (c) : Let the number is x	X = 0
According to the question,	$-10 \times (12 \text{ y}) \pm \text{y}$
3 1 . 50	$-10 \times (13 - x) + x$ - 10 × (12 - 8) + 9
$\frac{-x}{4} = \frac{-x}{3} + 50$	$-10 \times (15 - 8) + 8$ - 10 × 5 + 8 - 58
3 1	$\frac{-10 \times 3 + 8 - 38}{127}$
$\frac{3}{4}x - \frac{1}{2}x = 50$	127. The sum of a two digit number is 9. The
	interchanged find the changed number
$\frac{9x-4x}{3} = 50$	(a) 45 (b) 72
12	(a) +3 (b) +2 (c) -63 (d) -27
5x = 600	RRB NTPC 02 04 2016 Shift • 2
$\mathbf{x} = 120$	Ans: (d) Let the tens digit be = x
124. The sum of the digits of a two digit number is	And the unit digit be $= y$
11. If the digits are interchanged, the number	Number = $10 \text{ x} + \text{y}$
decreases to 63. Find the number.	Given $\mathbf{x} + \mathbf{y} = 9$ (1)
(a) 83 (b) 92	According to the question A
(c) 29 (d) 38	(10 x + y) - (10 y + x) = 45
RRB NTPC 04.04.2016 Shift : 3	(10 x + y) (10 y + x) = 45 9x - 9y = 45
Ans : (b) Let the tens digit be x and the unit digit be y	x - y = 5 (2)
of the number.	Equation (1) + (2)
\therefore The number = $10x + y$	$2\mathbf{y} = 14 \rightarrow \mathbf{y} = 7$
According to the question-	$ \begin{array}{c} 2\Lambda = 14 \rightarrow \Lambda = 7 \\ From equation (1) \end{array} $
x + y = 11 (i)	$y = 9_{-}7 = 2$
$\Delta nd 10y \pm y = 10y \pm y = 62$	$y = 7 - 7 - 2$ Hence The required number = $10y_1y_2 = 10y_2 + 7 - 27$
A = 10y + x - 10x + y = 03	1100000000000000000000000000000000000

128. The sum of digits of a two-digit number is 10. When the digits are reversed, the number decreases by 54. Find the new number.	132. Find two consecutive numbers where thrice the first number is more than twice the second number by 5.
(a) 73 (b) 28 (c) 82 (d) 37	(a) 5 and 6 (b) 6 and 7 (c) 7 and 8 (d) 9 and 10
RRB NIPC 02.04.2016 Shift : 3	RRB NTPC 28.03.2016 Shift : 1
Ans: (b) Let the tens digit of the number is x and the unit digit is y. The number = $10x + y$	Ans : (c) Let the two consecutive numbers be x and $x+1$.
According to the question,	According to the question-
x + y = 10(i)	$3\mathbf{x} = 2(\mathbf{x}+1) + 5$
And $10x + y = 10y + x + 54$	$\Rightarrow 3x = 2x + 7$
\Rightarrow 9x - 9y = 54 \Rightarrow x - y = 6 (ii)	$\Rightarrow x = 7$
By adding equation (i) and (ii),	133. Which of the following numbers is a perfect square?
$2x = 16 \Longrightarrow x = 8, y = 2$	(a) 0.09 (b) 8.1
Hence, the new number = $10y + y = 10y + 2 + 8 = 28$	(c) 0.025 (d) All
$\frac{-10y + x - 10 \times 2 + 6 - 26}{120}$	KKD NTPC 29.05.2010 SHIIT: 2 Ans: (a) $0.09 = (0.3)^2$
When the digits are interchanged, the number	Hence, only 0.09 is a perfect square number.
increases by 18. Find the number.	Type - 5
(a) 46 (b) 64 (c) 19 (d) 28	Problems Based on Rational
RRB NTPC 29.03.2016 Shift : 1	and Irrational Numbers
Ans: (a) Let the tens digit of the number is x and the	134. $0.\overline{23}$ is
unit digit is y.	(a) An irrational number
\therefore The number = 10x + y	(b) A rational number
According to the question- x + y = 10(i)	(d) A composite number
And $10x + y = 10y + x = 18$ (1)	RRB NTPC 20.01.2021 (Shift-I) Stage Ist
9x - 9y = -18	Ans. (b) : Let us assume
x - y = -2(ii)	y = 0.23(i)
By adding equation (i) and (ii) -	Multiplying by 100 in equation (1)-
$2x = 8 \Rightarrow x = 4$, $y = 6$	$100y = 23 \cdot 23 \dots \dots (ii)$
Hence, The required number $= 10 \times 4 + 6 = 46$	Subtracting eq. (1) from eq. (1) 199v = 23
130. Calculate the sum of squares of numbers from	
1 to 9. (a) 284 (b) 285	$y = \frac{1}{99}$ (Rational number)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	135. $(\sqrt{3} + \sqrt{11})^2$ is a/an
RRB NTPC 27.04.2016 Shift : 1	(a) Natural number (b) Whole number
Ans : (b) The sum of squares of first n numbers	(c) Irrational number (d) Rational number
$-\frac{n(n+1)(2n+1)}{2n+1}$	KKB N1PC 20.01.2021 (Snift-1) Stage 1st
- 6	$(\frac{1}{2} + \frac{1}{1})^2 - 2 + \frac{1}{1} + 2 + \frac{1}{2} + \frac{1}{1}$
\therefore The sum of squares from 1 to 9 will be-	$(\sqrt{3} + \sqrt{11}) = 3 + 11 + 2 \times \sqrt{3} \times \sqrt{11}$
$=\frac{9(9+1)(18+1)}{9}=\frac{9\times10\times19}{9}=285$	$(\sqrt{3} + \sqrt{11})^2 = 14 + 2\sqrt{33}$
6 6	Therefore $(\sqrt{3} + \sqrt{11})^2$ is an irrational number
131. Calculate the sum of squares of number from 1 to 10	136. The product of $\sqrt{2}$ and $\sqrt{3}$ is:
(a) 384 (b) 285	(a) Sometimes a rational number and sometimes
(c) 385 (d) 380	(b) Equal to 4
RRB NTPC 30.04.2016 Shift : 2	(c) A rational number
Ans: (c) The sum of squares of first n numbers $n(n+1)(2-1)$	(d) An irrational number BBB NTPC 20 01 2021 (Shift I) Stars Lat
$=\frac{n(n+1)(2n+1)}{2}$	Ans. (d) : From above question
The sum of squares of the numbers from 1 to 10 will	$\sqrt{2} \times \sqrt{3} = \sqrt{6}$ (irrational number)
be-	An irrational number is a real number that can't be
$10(10+1)(20+1) = 10 \times 11 \times 21$	expressed in the form p/q , $q\neq 0$
=	for example - $\sqrt{2}$, $\sqrt{5}$, $\sqrt{7}$, etc.

137. The number of rational number between 5 and 7 is:	(a) A rational number (b) A natural number
(a) 2 (b) 0	RRB NTPC 13.01.2021 (Shift-I) Stage Ist
(c) Infinite (d) 1	Ans. (a) : Given.
RRB NTPC 19.01.2021 (Shift-II) Stage Ist	$3\sqrt{5} + \sqrt{125}$
Ans. (c) : Note:- The number of rational numbers	$\frac{5\sqrt{5}+\sqrt{125}}{\sqrt{20}+\sqrt{5}}$
between any two integers is infinite. Hence, the number of rational numbers between 5 and 7 will be infinite	$\sqrt{80+6\sqrt{5}}$
$\frac{129}{129} = 2 \pm 2\sqrt{5} \pm 2$	$=\frac{3\sqrt{5}+5\sqrt{5}}{5}$
138. $3 + 2\sqrt{5}$ IS: (a) Rational number (b) Irrational number	$4\sqrt{5} + 6\sqrt{5}$
(c) Composite number (d) Natural number	8\sqrt{5} 8 4 (, ,)
RRB NTPC 07.01.2021 (Shift-II) Stage Ist	$=\frac{1}{10\sqrt{5}}=\frac{1}{10}=\frac{1}{5}$ (rational number)
Ans. (b) : Irrational number: The set of real numbers	$3\sqrt{5} + \sqrt{125}$
that cannot be represented in form of p/q is called	Therefore $\frac{5\sqrt{5}+\sqrt{125}}{\sqrt{20}+\sqrt{5}}$ is a rational number
irrational number.	$\frac{\sqrt{80+6\sqrt{5}}}{143}$ Number 0.232323 can be written in rational
Example- $\sqrt{2}$, $\sqrt{3}$	form as:
$\therefore 3 + 2\sqrt{5}$ is an irrational number.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
139. The number 1.112123123412345is a/an:	(a) $\frac{1}{999}$ (b) $\frac{1}{99}$ (c) $\frac{1}{9}$ (d) $\frac{1}{990}$
(a) Integer (b) Natural number	RRB NTPC 30.12.2020 (Shift-I) Stage Ist
(c) National number (d) Irrational number	Ans. (b) : 0.232323
KRD NIPC 15.01.2021 (Silit-1) Stage 1st Ans (d) \cdot The number 1 112123123412345 is an	$= 0.\overline{23}$
irrational number.	23
140. Which of the following rational number lies	$=\frac{1}{99}$
between $\frac{1}{2}$ and $\frac{1}{2}$	144. Which of the following rational number lies
between $\frac{1}{4}$ and $\frac{1}{2}$.	between 9.2 and 10.5?
(a) $\frac{1}{2}$ (b) $\frac{1}{2}$	(a) 9.15 (b) 9.55
(d) 6 (0) 8	(c) 10.67 (d) 9.08
(c) $\frac{3}{2}$ (d) $\frac{3}{2}$	RRB NTPC 03.03.2021 (Shift-I) Stage Ist
5 8 DDD NTDC 21 01 2021 (Shift ID Stars Lat	Ans. (b) : 9.55 is the rational number lies between 9.2
RKB NIPC 51.01.2021 (Snift-II) Stage 1st	145 Which of the following is a rational number
1 + 1 + 2	between $\sqrt{5}$ and $\sqrt{7}$?
$\frac{1}{4} + \frac{1}{2} = \frac{1+2}{4} = 3$	
$=\frac{4}{2}=\frac{4}{2}=\frac{4}{2}=\frac{4}{8}$	(a) $4\frac{1}{5}$ (b) $1\frac{1}{5}$
Therefore rational number $\frac{3}{2}$ will lie between $\frac{1}{2}$ and	3 3 3 1
Therefore, rational number $\frac{-}{8}$ with the between $\frac{-}{4}$ and $\frac{-}{4}$	(c) $2\frac{2}{5}$ (d) $3\frac{1}{5}$
1	RRB NTPC 20.01.2021 (Shift-I) Stage Ist
2	Ans (a): $\sqrt{5} = 2.23$ and $\sqrt{7} = 2.64$
141 Express <u>-40</u> as a rational number whose	From the given ontions
56 56 56	1 21 1 6
numerator is –5.	(a) $4\frac{1}{5} = \frac{21}{5} = 4.2$ (b) $1\frac{1}{5} = \frac{6}{5} = 1.2$
(a) $-\frac{3}{6}$ (b) $-\frac{3}{2}$	
6 8 5 5	(c) $2\frac{2}{5} = \frac{12}{5} = 2.4$ (d) $3\frac{1}{5} = \frac{10}{5} = 3.2$
(c) $-\frac{5}{7}$ (d) $-\frac{5}{18}$	
RRB NTPC 23.07.2021 (Shift-II) Stage Ist	Hence $2\frac{2}{5}$, is a rational number between $\sqrt{5}$ and $\sqrt{7}$.
Ans. (c) : From question,	146. Which of the following is not a rational
$-\frac{40}{-8\times 5} - \frac{5}{-5}$	number?
56 8×7 7	
	$\sqrt{3^2+4^2}$, $\sqrt{12.96}$, $\sqrt{125}$ and $\sqrt{900}$
It is clear that option (c) is the required rational number.	$\sqrt{3^2 + 4^2}, \sqrt{12.96}, \sqrt{125} \text{ and } \sqrt{900}$ (a) $\sqrt{12.96}$ (b) $\sqrt{900}$
It is clear that option (c) is the required rational number. $(3\sqrt{5} + \sqrt{125})$	$\sqrt{3^2 + 4^2}, \sqrt{12.96}, \sqrt{125} \text{ and } \sqrt{900}$ (a) $\sqrt{12.96}$ (b) $\sqrt{900}$ (c) $\sqrt{125}$ (d) $\sqrt{2^2 + 4^2}$

Ans. (c) : $\sqrt{3^2 + 4^2} = \sqrt{9 + 16} = \sqrt{25} = 5 \rightarrow \text{Rational}$	151. Find the digit in the unit's place of $124^{n} + 124^{(n+1)}$, where n is any whole number.
number 26 18	(a) 4 (b) 8
$\sqrt{12.96} = \sqrt{1296 \times 10^{-2}} = \frac{30}{10} = \frac{18}{5} \rightarrow \text{Rational number}$	(c) 2 (d) 0 $\frac{1}{2}$ (d) 0 (c) $\frac{1}{2}$ (d) $\frac{1}{2}$ (c) $\frac{1}{2}$
$\sqrt{125} = \sqrt{5 \times 5 \times 5} = 5\sqrt{5} \rightarrow$ Irrational Number	KKB N I PC 17.02.2021 (Snift-II) Stage 1st Ans (d) $\cdot 124^{n} + 124^{(n+1)}$
$\sqrt{125} = \sqrt{3} \times 5 \times 5 = 3\sqrt{5}$ \rightarrow induced in the second	On putting $n = 1$
$\sqrt{900} = \sqrt{30 \times 30} = 30 - 7$ Rational Number	$= 124 + (124)^2$
Hence, $\sqrt{123}$ is not a rational number.	For unit digit $4 + 6 = 10$
number between the range 2/4 and 0.6.	Hence, It is clear that the digit come in the unit place
$\begin{array}{c} 11 \\ 11 \\ 11 \\ 12 \\ 11 \\ 12 \\ 12 \\ 12 $	Will be '0'.
(a) $\frac{1}{25}$ (b) $\frac{1}{40}$	152. What is the unit digit in the following product: $01_{2}02_{2}03_{2}$ ~ 00
(c) $\frac{3}{2}$ (d) $\frac{11}{2}$	(a) 2 (b) 1 (c) 4 (d) 0
	RRB NTPC 09.02.2021 (Shift-II) Stage Ist
RRB NTPC 19.01.2017 Shift : 2	Ans. (d) : $:: 91 \times 92 \times 93 \times 94 \times 95 \times 96 \times 97 \times 98 \times 99$
Ans: (b) From option (b), 2	On multiplying all these numbers by taking their unit
The rational number between $\frac{2}{4} = 0.5$ and 0.6	digits, you can see $5 \times 2 = 10$, $4 \times 5 = 20$ etc.
21	Hence the unit digit of number coming from the multiplication of all the number will be 0
$=\frac{-1}{40}=0.525$	153 Find the number of factors of 4200
Hence, 0.5< 0.525< 0.6	(a) 48 (b) 56 (c) 64 (d) 46
148. All irrational numbers arenumbers.	RRB NTPC 26.07.2021 (Shift-II) Stage Ist
(a) Integers (b) Imaginary	Ans. (a) : $4200 = 2 \times 2 \times 2 \times 5 \times 5 \times 3 \times 7$
$(c) \text{ whole } (d) \text{ Keal} \\ \mathbf{RRR NTPC 19 01 2017 Shift \cdot 3}$	$=2^{3}\times5^{2}\times3^{1}\times7^{1}$
Ans: (d) All irrational numbers are real numbers	The number of factors = $(3+1) \times (2+1) \times (1+1) \times (1+1)$
Example $\sqrt{2}$	$= 4 \times 3 \times 2 \times 2$ $= 48$
	- +0
	154 How many factors does the number 17788
Type-6	have?
Type-6 Problems Based on Unit Digit and	have? (a) 24 (b) 26
Type-6 Problems Based on Unit Digit and Factorization of Numbers	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 DDD NTDC 22 07 2021 (SLife D Stars Ltd)
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6 ⁿ - 5 ⁿ always ends	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6 ⁿ - 5 ⁿ always ends with ;	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6 ⁿ - 5 ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : 12288 = $2 \times 2 $
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6 ⁿ - 5 ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6Problems Based on Unit Digit and Factorization of Numbers149. For any natural number n, 6 ⁿ - 5 ⁿ always ends with ;(a) 7(b) 1(c) 5(d) 3RRB NTPC 28.12.2020 (Shift-II) Stage IstAns. (b) : The unit value of 6 ⁿ -5 ⁿ for any natural	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6 ⁿ - 5 ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of 6 ⁿ -5 ⁿ for any natural number 'n' will always be 1 because any natural number	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : 12288 = $2 \times 2 $
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6 ⁿ - 5 ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of 6 ⁿ -5 ⁿ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, $6^n - 5^n$ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - $6^2 - 5^2 = 36 - 25 = 11$	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6Problems Based on Unit Digit and Factorization of Numbers149. For any natural number n, $6^n - 5^n$ always ends with ;(a) 7(b) 1(c) 5(d) 3RRB NTPC 28.12.2020 (Shift-II) Stage IstAns. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - $6^2 - 5^2 = 36 - 25 = 11$ 150. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ?	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : 12288 = $2 \times 2 $
Type-6Problems Based on Unit Digit and Factorization of Numbers149. For any natural number n, $6^n - 5^n$ always ends with ;(a) 7(b) 1(c) 5(d) 3RRB NTPC 28.12.2020 (Shift-II) Stage IstAns. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - $6^2 - 5^2 = 36 - 25 = 11$ 150. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ? (a) 40(a) 40(b) 280	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6Problems Based on Unit Digit and Factorization of Numbers149. For any natural number n, $6^n - 5^n$ always ends with ;(a) 7(b) 1(c) 5(d) 3RRB NTPC 28.12.2020 (Shift-II) Stage IstAns. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - $6^2 - 5^2 = 36 - 25 = 11$ 150. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ? (a) 40 (b) 280 (c) 320(b) 280 (c) 320(d) 84	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : 12288 = $2 \times 2 $
Type-6Problems Based on Unit Digit and Factorization of Numbers149. For any natural number n, $6^n - 5^n$ always ends with ;(a) 7(b) 1(c) 5(d) 3RRB NTPC 28.12.2020 (Shift-II) Stage IstAns. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - $6^2 - 5^2 = 36 - 25 = 11$ 150. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ? (a) 40 (b) 280 (c) 320(c) 320(d) 84RRB NTPC 31.01.2021 (Shift-I) Stage Ist RBB NTPC 14.03.2021 (Shift-I) Stage Ist	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : 12288 = $2 \times 2 $
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, $6^n - 5^n$ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. $Ex - 6^2 - 5^2 = 36 - 25 = 11$ 150. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ? (a) 40 (b) 280 (c) 320 (d) 84 RRB NTPC 31.01.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist Ans. (b) : Number of factors of $2^7 \times 3^4 \times 5^3 \times 7$	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6ⁿ - 5ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of 6 ⁿ -5 ⁿ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - 6 ² - 5 ² = 36 - 25 = 11 150. How many factors of 2⁷ × 3⁴ × 5³ × 7 are even ? (a) 40 (b) 280 (c) 320 (d) 84 RRB NTPC 31.01.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist Ans. (b) : Number of factors of 2 ⁷ × 3 ⁴ × 5 ³ × 7 = (7 + 1) (4 + 1) (3 + 1) (1 + 1)	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6ⁿ - 5ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of 6 ⁿ -5 ⁿ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - 6 ² - 5 ² = 36 - 25 = 11 150. How many factors of 2⁷ × 3⁴ × 5³ × 7 are even ? (a) 40 (b) 280 (c) 320 (d) 84 RRB NTPC 31.01.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist Ans. (b) : Number of factors of 2 ⁷ × 3 ⁴ × 5 ³ × 7 = (7 + 1) (4 + 1) (3 + 1) (1 + 1) = 8 × 5 × 4 × 2 200	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
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Type-6Problems Based on Unit Digit and Factorization of Numbers149. For any natural number n, $6^n - 5^n$ always ends with ;(a) 7(b) 1(c) 5(d) 3RRB NTPC 28.12.2020 (Shift-II) Stage IstAns. (b) : The unit value of $6^n - 5^n$ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - $6^2 - 5^2 = 36 - 25 = 11$ 150. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ? (a) 40 (b) 280 (c) 320 (d) 84RRB NTPC 31.01.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist R ans. (b) : Number of factors of $2^7 \times 3^4 \times 5^3 \times 7$ = $(7 + 1) (4 + 1) (3 + 1) (1 + 1)$ = $8 \times 5 \times 4 \times 2$ = 320 ∴ Number of even factors = $320 - 104$ number of odd factors. = $320 - {(4 + 1) (3 + 1) (1 + 1)}$ = $320 - {5 \times 4 \times 2}$	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : $12288 = 2 \times 2$
Type-6 Problems Based on Unit Digit and Factorization of Numbers 149. For any natural number n, 6ⁿ - 5ⁿ always ends with ; (a) 7 (b) 1 (c) 5 (d) 3 RRB NTPC 28.12.2020 (Shift-II) Stage Ist Ans. (b) : The unit value of 6 ⁿ -5 ⁿ for any natural number 'n' will always be 1 because any natural number in the power of 6 has its unit digit as 6. Similarly, any natural number in the power of 5 has its unit digit as 5. Ex - 6 ² - 5 ² = 36 - 25 = 11 150. How many factors of 2⁷ × 3⁴ × 5³ × 7 are even ? (a) 40 (b) 280 (c) 320 (d) 84 RRB NTPC 31.01.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist RRB NTPC 14.03.2021 (Shift-I) Stage Ist Ans. (b) : Number of factors of $2^7 × 3^4 × 5^3 × 7$ = (7 + 1) (4 + 1) (3 + 1) (1 + 1) = $8 × 5 × 4 × 2$ = 320 \therefore Number of even factors = 320 - total number of odd factors. = $320 - \{(4 + 1) (3 + 1) (1 + 1)\}$ = $320 - \{5 × 4 × 2\}$ = $320 - 40$ - 280	154. How many factors does the number 12288 have? (a) 24 (b) 26 (c) 28 (d) 22 RRB NTPC 23.07.2021 (Shift-I) Stage Ist Ans. (b) : 12288 = $2 \times 2 $

Ans : (b) $\left[(4523)^{1632} \times (2224)^{1632} \times (3225)^{1632} \right]$	Ans. (c) : The place value of 5 in 56789214 – 56789214
$\rightarrow (3)^4 \times (4)^4 \times (5)^4$	
$= (3) \times (4) \times (5)$ 81 × 256 × 625	$\rightarrow 5 \times 10^7$
	162. Find the sum of the place value and the face
	value of 7 in the number 53736.
1×6×5	(a) 77 (b) 707
$30 \Rightarrow 0$	(C) //U (d) /// RRR NTPC 20 01 2021 (Shift II) Store Ist
157. Calculate the total prime factors in the product $(x_1)^{10}$	Ans. (b): The place value and the face value of 7 in the
of $\{(8) \times (9) \times 7^{\circ}\}$	number 53736.
(a) 45 (b) 54 (c) 52 (d) 65	Place value of $7 = 700$
RRB NTPC 18.04.2016 Shift : 2	Face value of $7 = 7$
Ans : (c) $(8)^{10} \times (9)^7 \times 7^8$	$\begin{array}{l} \text{Required sum} &= 700 + 7 \\ &= 707 \end{array}$
$(1)^{10} (0)^{10} (0)^{7} (0)^{7}$	163. In the number 76897, what is the place value of
$= \left((2)^{\circ} \right) \times \left((3)^{2} \right) \times (7)^{\circ}$	8?
$=2^{30} \times 3^{14} \times 7^{8}$	(a) 8 (b) 8000
Hence, the total prime factors = $30+14+8 = 52$	(c) 800 (d) 80
158. Calculate the total prime factors in the product of $f(16)^7 \times (27)^6 \times 5^9$	RKB NTPC 09.03.2021 (Snift-II) Stage 1st
(a) 28 (b) 43	$7 6 \otimes 9 7$
(c) 55 (d) 56	Place value
RRB NTPC 16.04.2016 Shift : 2	\rightarrow 7 \rightarrow 90
Ans : (c) Total prime factors $\{(16)^7 \times (27)^6 \times 5^9\}$	
$=(2^4)' \times (3^3)^{\circ} \times 5^{\circ}$	70000
$= 2^{28} \times 3^{18} \times 5^9$	Hence, place value of 8 in 76897 will be 800.
= 28 + 18 + 9 = 55	164. The face value of 8 in 758639 is :
159. Find the unit digit in the product of $(4211)^{102} \times (361)^{52}$	$\begin{array}{c} (a) & 8000 \\ (c) & 800 \\ (c) & 800 \\ (d) & 8 \end{array}$
(a) 3 (b) 1	RRB NTPC 25.01.2021 (Shift-II) Stage Ist
(d) 7	Ans. (d) : In the given number = 758639
RRB N1PC 16.04.2016 Shift : 3	The face value of $8 = 8$
The required unit digit in $(4211)^{102} \times (361)^{52}$	165. Find the difference of the place and face values $f(i = 51(272))$
$\Rightarrow (1)^{102} \times (1)^{52} = 1 \times 1 = 1$	(a) 5998 (b) 6698
160. Find the unit digit in the following $(122.0)^{102} + (122.0)^{103}$	(c) 5394 (d) 5994
$(1234)^{102} + (1234)^{100}$	RRB NTPC 25.01.2021 (Shift-II) Stage Ist
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Ans. (d) : The place values of 6 in 516372–
RRB NTPC 28.04.2016 Shift : 2	516372
Ans : (c) Given expression: $(1234)^{102} + (1234)^{103}$	1000
$= (4)^{102} + (4)^{103}$	the face values of $6 = 6$
$= (4^2)^{51} + (4^2)^{51} \times 4^1$	Required difference = $6000 - 6$
$=(16)^{51}+(16)^{51}\times 4^{1}$	= 5994
$= 6 + 6 \times 4$ = 6 + 2 4 = 30	166. The sum of the place values of 3 in 3636 is:
Hence, the unit digit will be 0.	(a) 330 (b) 3030 (c) 3 (d) 3003
Type – 7	RRB NTPC 25.01.2021 (Shift-II) Stage Ist
Problems Based on Place Value	Ans. (b) : The place value of 3 in 3636.
and Numerical Value	3636
161. What is the place value of 5 in the number	$3 \times 10 = 30$
56789214?	- 2 - 100 - 2000
(a) $5 \times 10^{\circ}$ (b) $5 \times 10^{\circ}$ (c) 5×10^{7} (d) 5×10^{5}	Sum of place values of $3 = 3000 + 30$
(0) 5/10 (0) 5/10 BBB NTPC 20 01 2021 (Shift II) Staga I	= 3030



Ans. (d) : Total length of carpet = $20\frac{5}{2} = \frac{45}{2}$ meters 179. Karuna reads $\frac{1}{4}$ th of a book in one hour. What fraction of the book will she be able to read in Length of small pieces of carpet = $\frac{9}{2}$ meters 2h 15 min? (a) $\frac{1}{9}$ (b) $\frac{1}{8}$ Required pieces = $\frac{\frac{43}{2}}{\frac{9}{2}} = 5$ pieces. (c) $\frac{9}{16}$ (d) 9 176. Rakesh donates blood twice in 3 years each RRB NTPC 03.03.2021 (Shift-II) Stage Ist time 330ml. How many litres of blood will he donate in 6 years. Ans. (c) : Read parts in 1 hours = $\frac{1}{4}$ (a) 1.36 L (b) 1.30 L (d) 1.34 L (c) 1.32 L \therefore 2 hours 15 minutes = 2h + $\frac{15}{60}$ hours RRB NTPC 04.02.2021 (Shift-II) Stage Ist Ans. (c) : Blood donates twice in 3 years. $= \left(2 + \frac{1}{4}\right) \text{hours}$ = 9/4 hoursThen the blood donates in 6 years $(2 \times 2) = 4$ times. Total blood donates in 6 years = $4 \times 330 = 1320$ ml $=\frac{1320}{1000}$ L = 1.32 L $\therefore \text{ Read parts in } \frac{9}{4} \text{ hours } = \frac{1}{4} \times \frac{9}{4}$ 177. John, Sarah, Tom and Joane bought 3 pizzas of the same size in all. John eat 2/4 of a pizza. Sarah, Tom and Joane eat 3/4 of a pizza each. 180. Jane won the lottery and get 1/3 of the prize How much pizza was left? money she makes a donation of Rs. 6000 which (a) $\frac{1}{4}$ of a pizza (b) $\frac{1}{2}$ of a pizza is 1/6th part. The total amount of lottery is: (a) 36000 (b) 18000 (d) $\frac{3}{4}$ of a pizza (c) 54000 (d) 108000 (c) 1 pizza **RRB NTPC 03.04.2016 Shift : 2** RRB NTPC 05.02.2021 (Shift-I) Stage Ist Ans: (d) Let the price of the lottery = Rs. xAns. (a) : Suppose a pizza has 4 parts. From the question-Total parts of 3 pizzas = $4 \times 3 = 12$ $\left(\frac{x}{3}\right) \times \frac{1}{6} = 6000$ $\frac{x}{18} = 6000$ John Sarah Tom Joane Eaten Parts 2 parts 3 parts 3 parts 3 parts x = Rs. 108000Remaining parts = 12 - (2 + 3 + 3 + 3) = 1How many millimeters in 10 km? 181. Remaining parts of 3 pizzas = $\frac{1}{12} \times 3 = \frac{1}{4}$ of a pizza (a) 10^{10} (b) 10^9 (c) 10^8 (d) 10^7 RRB NTPC 31.03.2016 Shift : 2 If 2/5 of the number of girl students attending a 178. **Ans:** (d) 1 km = 1000 mschool function is equal to 3/5 of the number of $= 1000 \times 1000 \text{ mm}$ boys attending the function. What fraction of (1 m = 1000 mm) $= 10^{6} \text{ mm}$ the total students attending the function will be 2/5 of the number of girl students attending the $\therefore 10 \text{ km} = 10 \times 10^6 = 10^7 \text{ mm}$ function? What will be the next set of numbers in given 182. (a) $\frac{5}{6}$ (c) $\frac{1}{5}$ (b) $\frac{2}{3}$ (d) $\frac{6}{25}$ series. (2, 3), (3, 5), (5, 7), (7, 11), (11, 13),(a) (13, 15) (b) (15, 17) (d) (13, 19) (c) (13, 17)RRB NTPC 17.01.2017 Shift-1 RRB NTPC 05.02.2021 (Shift-I) Stage Ist Ans: (c) The above series is a set of prime numbers **Ans. (d) :** Let, number of boys in function = x (2,3), (3,5), (5,7), (7,11), (11,13), (13,17)And number of girls in function = y Therefore, the next set of the series is (13, 17)According to the question, 183. By how much is $\frac{1}{6}$ th of 432 smaller than $\frac{3}{4}$ th of $y \times \frac{2}{5} = x \times \frac{3}{5} \Longrightarrow x : y = 2 : 3$ 216? (b) 72 Required fraction = $\frac{y \times 2/5}{(x+y)} = \frac{3 \times 2/5}{5} = \frac{6}{25}$ (a) -90 (c) 90 (d) 162 RRB NTPC 15.03.2021 (Shift-II) Stage Ist

2x + 69 = 992x = 99 - 69Ans. (c) : According to the question- $\frac{1}{6}$ part of $432 = 432 \times \frac{1}{6} = 72$ $x = \frac{30}{2}$ and $\frac{3}{4}$ part of 216 = 216 $\times \frac{3}{4}$ = 162 x =₹15 Hence the fares from city P to Q and the fares from city Required difference = 162 - 72P to R are ₹15, ₹23 respectively. 187. There are 40 persons in a palace. If every 184. Terry consumes 1700 mL of milk every day. person shakes hands with every other person, How many litres of milk will she consume in 5 what will be the total number of handshakes? weeks? (a) 750 (b) 780 (a) 59 L (b) 60 L (d) 790 (c) 800 (c) 58.5 L (d) 59.5 L RRB NTPC 21.01.2021 (Shift-I) Stage Ist RRB NTPC 09.02.2021 (Shift-II) Stage I **Ans. (b) :** Total number of handshakes $=\frac{n(n-1)}{2}$ Ans. (d) : \therefore Terry consumes in 1 day = 1700 mL $= \frac{\frac{40(40-1)}{2}}{=\frac{40\times39}{2}}$ $= 20\times39$ In 5 weeks = 35 days = $\frac{1700 \times 35}{1000}$ ÷. $=\frac{59500}{1000}$ L = 59.5L185. Mohan earns ₹60 on first day and spends ₹50 In a group of 35 persons, 20 are young and 18 on the second day. He again earns ₹60 on the 188. are girls. How many young girls are there in third day and spends ₹50 on the fourth day and so on. On which day will he have ₹200 with him the group ? **before spending?** (a) 10th (a) 1 (b) 3 (b) 14^{th} (c) 18 (d) 2(c) 28^{th} (d) 29^{th} RRB NTPC 17.01.2021 (Shift-II) Stage Ist RRB NTPC 24.07.2021 (Shift-II) Stage Ist Ans. (b) : According to the question, Ans. (d) : Mohan earns on the first day = ₹60Girls (15 (3) 17 Young and spends on the second day = ₹50 Thus, in 2 days Mohan saves = ₹10 It is clear from above venn diagram that number of Hence, Mohan saves in 28 days=₹140 Mohan will earn on 29^{th} day = ₹60 young girls in the group = 3On the 29th day Mohan has = 140 + 60189. X, Y and Z together earn ₹ 2,400/- in 15 days, So. X and Y together earn ₹ 1,840/- in 16 days. Y =₹200 and Z together earn ₹ 1,530/- in 18 days. What Two bus tickets from city P to Q and three 186. is the daily earning (in ₹) of Y? tickets from city P to R cost ₹99, but three (a) ₹50 (b) ₹40 tickets from city P to Q and two tickets from (c) ₹60 (d) ₹30 city P to R cost ₹91. What are the respective RRB NTPC 05.03.2021 (Shift-I) Stage Ist fares from city P to Q and from city P to R. Ans. (b) : (a) ₹23, ₹15 (b) ₹51, ₹32 Amount earned by X, Y and Z in 1 day $=\frac{2400}{15}=160$ (c) ₹15, ₹23 (d) ₹32, ₹51 RRB NTPC 31.01.2021 (Shift-I) Stage Ist Ans. (c) : Let the fares from city P to $Q = \mathcal{E}_X$ Amount earned by X, Y in 1 day $=\frac{1840}{16}=115$ and the fares from city P to $R = \mathbf{R}$ According to the question, Amount earned by Y and Z in 1 day $=\frac{1530}{18}=85$ 2x + 3y = 99...(i) 3x + 2y = 91...(ii) \therefore Daily earning of Y = (Daily earning of X and Y On multiplying by 3 in equation (i) and 2 in equation together) + (Daily earning of Y and Z together) -(ii) (Daily earning by X, Y and Z together) 6x + 9y = 297...(iii) = 115 + 85 - 1606x + 4y = 182...(iv) = 40From equation (iii) & (iv) we have -5y = 115190. The remainder in the expression $27\frac{3}{4}$ is: y =₹23 (b) 4 (a) 6 On putting the value of y in equation (i), (c) 3 (d) 8 $2x + 3 \times 23 = 99$ RRB NTPC 15.02.2021 (Shift-I) Stage Ist

Ans. (c) : In the given expression,	Ans. (b) : 8.17 hours
Dividend = quotient \times divisor + remainder	17
$= 27 \times 4 + 3$	$= 8 \text{ hours} + \frac{100}{100} \times 60 \text{ minutes}$
\therefore Remainder = 3	= 8 hours $+ 10.2$ minutes
191. A maximum of how many pieces of exact 17 cm length can be cut from a 960 cm long rod?	= 8 hours + 10 minutes + $\frac{2}{10} \times 60$ seconds
(a) 50 (b) 50 (c) 54 (d) 56	= 8 hours 10 minutes 12 seconds
RRB NTPC 08.02.2021 (Shift-I) Stage Ist	105 N has n more amount than K. Total amount of
Ans. (d) : According to question	N and K together is ₹a How much amount
960 8	does K have?
Number of pieces $=\frac{300}{17}=56+\frac{30}{17}$	
Hence, number of pieces of exact 17 cm length will be 56.	(a) $\frac{q}{2} + p$ (b) $2(p+q)$
192. Find the value of $\frac{1}{14} + \frac{1}{47} + \frac{1}{710} + \dots + \frac{1}{4750}$	(c) $\frac{(p+q)}{2}$ (d) $\frac{(q-p)}{2}$
1.4 4.7 7.10 47.50	RRB NTPC 17.01.2017 Shift-2
(a) $\frac{49}{50}$ (b) $\frac{47}{150}$	Ans :(d) $N = K + p$ (i) N + K = q
47 49	Putting the value of N from the equation (i)
(c) $\frac{1}{50}$ (d) $\frac{15}{150}$	K + p + K = a
RRB NTPC 16.02.2021 (Shift-II) Stage Ist	2K = q - p,
Ans (d) :	q = p
	So, $K = \frac{1}{2}$
$\frac{1}{14} + \frac{1}{47} + \frac{1}{710} + \dots + \frac{1}{4750}$	196 Two-fifth of Narendra's salary is equal to
$1.4 \ 4.7 \ /.10 \ 47.50$	Amit's salary and seven-ninth of Amit's salary
Given expression 1, 4, 7,47, and 4, 7, 10,50 are	is equal to Arun's salary. If the sum of the
sum of given term_	salaries is ₹770, what are the respective salaries
	of Narendra, Amit and Arun (in ₹)?
$\frac{1}{D^{1}(0)} \left(\frac{1}{D^{1}(1)} - \frac{1}{D^{1}(1)} \right)$	(a) 450, 140, 180 (b) 450, 180, 140
Difference (First term Last term)	(c) 180, 450, 140 (d) 180, 140, 450
$=\frac{1}{1}(\frac{1}{1}-\frac{1}{1})$	RRB NTPC 03.02.2021 (Shift-II) Stage Ist
3(1 50)	Ans. (b) : According to the question,
1 49	Narendra's salary $\times \frac{2}{-} = Amit's salary$
$=\frac{-1}{3}\times\frac{1}{50}$	$\frac{1}{5}$
49	Narendra's salary _ 5
$=\frac{15}{150}$	$\frac{1}{\text{Amit's salary}} = \frac{1}{2}$
150	7
103 How will you write 2.94 hours in hours minutes	And Amit's salary $\times \frac{7}{2}$ = Arun's salary
and seconds?	9
(a)2 hours 8 minutes 4 seconds	$\underline{\text{Amit's salary}}_{=} \underline{9}$
(b)3 hours 24 minutes	Arun's salary 7
(c)2 hours 50 minutes 24 seconds	Narendra : Amit: Arun
(d)2 Hours 50 minutes 4 seconds	$5 \cdot 2$
RRB NTPC 03.02.2021 (Shift-I) Stage Ist	5.2
Ans. (c) :	<u> </u>
2.84 hours = 2 hours +.84 \times 60 minutes	45 : 18 : 14
= 2 hours $+50.4$ minutes	The sum of their salaries $= ₹ 770$
$= 2 \text{ nours } +50 \text{ minutes } + 0.4 \times 60 \text{ seconds}$	$(45+18+14)$ units $\longrightarrow ₹770$
= 2 nours + 50 minutes + 24 seconds	77 units → ₹ 770
194. How will you write 8.17 hours in hours,	1 unit → ₹ 10
(a) 8 hours 17 minutes	Narendra's salary = $45 \times 10 = ₹450$
(a) 6 hours, 17 minutes (b) 8 hours, 10 minutes, 12 seconds	Amit's salary = $18 \times 10 = ₹180$
(c) 8 hours 10 minutes 7 seconds	Arun's salary = $14 \times 10 = ₹$ 140
(d) 8 hours, 12 minutes	Hence, the salaries of Narendra. Amit and Arun are 450
RRB NTPC 27.02.2021 (Shift-I) Stage Ist	180 and 140 respectively.