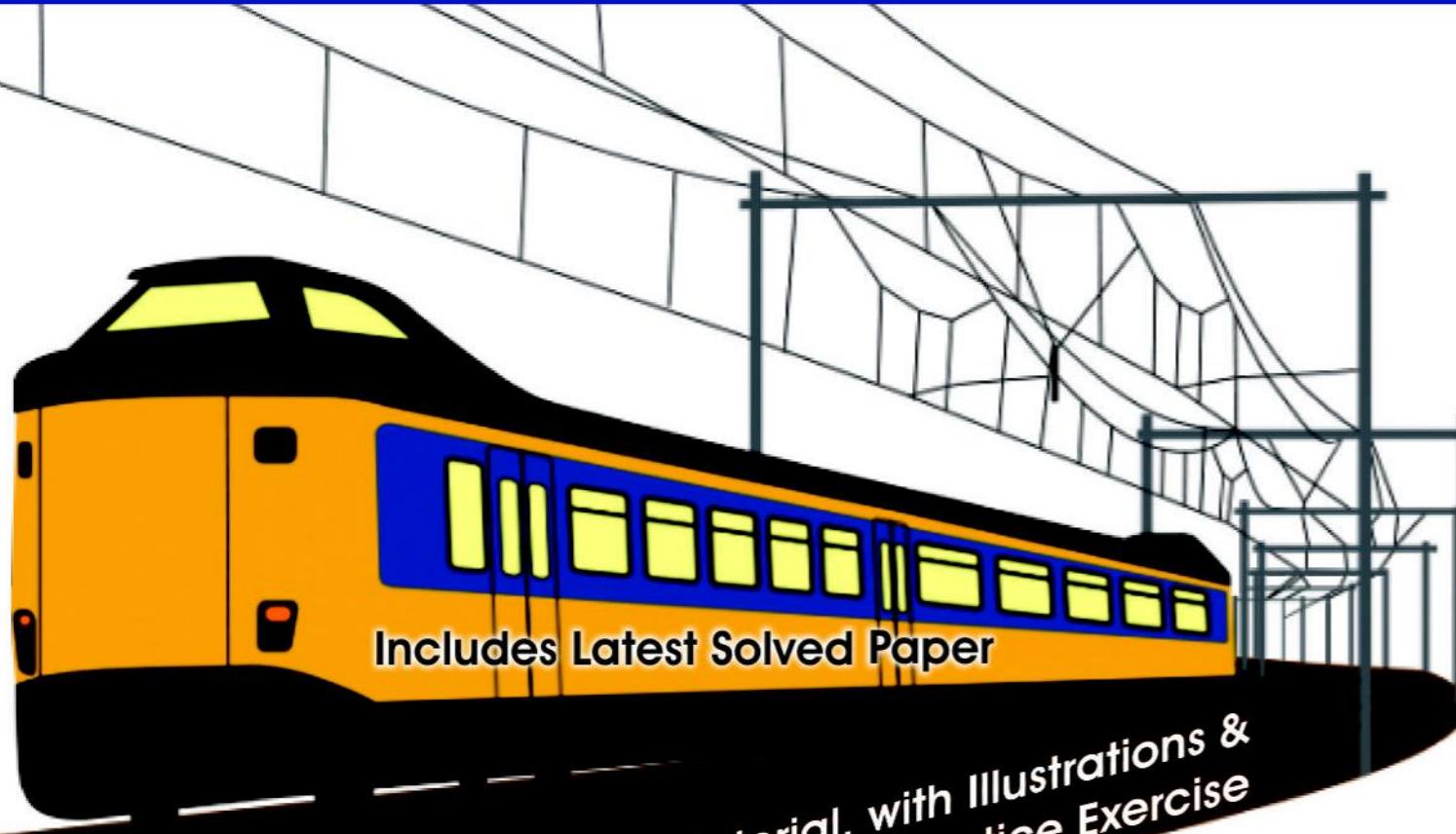


General Awareness
Arithmetic
General Science & Technical Ability
General Intelligence & Reasoning



Guide to Indian Railways

Assistant LOCO PILOT Recruitment Exam 2014



Includes Latest Solved Paper

**Complete Study Material, with Illustrations &
Fully Solved Practice Exercise**



(ii)

- **Head Office :** B-32, Shivalik Main Road, Malviya Nagar, New Delhi-110017
 - **Sales Office :** B-48, Shivalik Main Road, Malviya Nagar, New Delhi-110017
- Tel.** : 011-26692293 / 26692294

Price : ₹ 265/-

Typeset by Disha DTP Team

Developed & Edited by :
Preetima Bajpai, Sanjeev Kumar Jha, Laxmi Patwal, Sheenu Kamra

DISHA PUBLICATION

ALL RIGHTS RESERVED

© Copyright Author

No part of this publication may be reproduced in any form without prior permission of the author and the publisher. The author and the publisher do not take any legal responsibility for any errors or misrepresentations that might have crept in. We have tried and made our best efforts to provide accurate up-to-date information in this book.

For further information about the books from DISHA

Log on to www.dishapublication.com or email to info@dishapublication.co.in

contents

RRB (Assistant Loco Pilot) Exam, 2013

2013-1 - 8

Section A : ARITHMETIC

A-1 – A-74

1. Number system, HCF and LCM	1 - 10
2. Simplification	11 - 14
3. Surds, Indices, Square Roots and Cube Roots	15 - 19
4. Ratio & Proportion, Partnership	20 - 26
5. Average & Problem on ages	27 - 33
6. Percentage, Profit & Loss	34 - 42
7. Time and Work, Pipes & Cisterns	43 - 51
8. Time, Speed & Distance	52 - 58
9. Simple Interest & Compound Interest	59 - 64
10. Mensuration	65 - 74

Section B : GENERAL INTELLIGENCE AND REASONING

B-1 – B-64

1. Analogy	1 - 6
2. Classification	7 - 11
3. Series	12 - 16
4. Coding and Decoding	17 - 24
5. Word Formation	25 - 29
6. Blood Relation	30 - 35
7. Directions, Clock & Calender	36 - 43
8. Logical Venn Diagram	44 - 48
9. Syllogisms	49 - 60
10. Non verbal Reasoning	61 - 64

Section C : GENERAL SCIENCE & TECHNICAL ABILITY

c-1 – c-136

PHYSICS

1. Mechanics	1 - 11
2. Properties of matter	12 - 16
3. Heat	17 - 22

(iv)

4.	Sound	23 - 25
5.	Optics	26 - 31
6.	Electricity	32 - 38
7.	Magnetism	39 - 42
8.	Semiconductor Electronics	43 - 48

CHEMISTRY

1.	Nature of Matter	49 - 52
2.	Structure of Atom	53 - 56
3.	Classification of Elements and Periodicity in Properties	57 - 61
4.	Acids, Bases and Salts	62 - 66
5.	Metals & Non-Metals	67 - 72
6.	Environmental Pollution	73 - 78
7.	General Concepts of Chemistry	79 - 83
8.	Some Important Man-Made Materials	84 - 88
9.	General Organic Chemistry	89 - 92

BIOLOGY

1.	Diversity in Living Organisms	93 - 99
2.	Cells and Tissues	100 - 104
3.	Plant Physiology	105 - 110
4.	Human Physiology	111 - 117
5.	Genetics and Evolution	118 - 122
6.	Biology in Human Welfare	123 - 126
7.	Diseases and their defence mechanism	127 - 130
8.	Ecology & Environment Awareness	131 - 136

Section D : GENERAL AWARENESS

D-1 – D-46

1.	History	1 - 10
2.	Geography	11 - 20
3.	Indian Polity	21 - 29
4.	Miscellaneous	30 - 39
5.	Current Affairs	40 - 46



Assistant Loco Pilot Exam, 2013

Max. Marks : 120

Based on Memory

Time : 90 min.

2013-4

90. The famous Dilwara Temple is situated in:
(a) Madhya Pradesh (b) Maharashtra
(c) Gujarat (d) Rajasthan
91. Pneumonia affects:
(a) Lungs (b) Tongue
(c) Liver (d) Kidney
92. A man, a woman and a boy can together complete a piece of work in 3 days. If a man alone can do it in 6 days and a boy alone in 18 days, how long will a woman alone take to complete the work?
(a) 9 days (b) 21 days
(c) 24 days (d) 27 days
93. A does half as much work as B in one-sixth of the time. If together they take 10 days to complete a work, how much time shall B alone take to do it?
(a) 70 days (b) 30 days
(c) 40 days (d) 50 days
94. Two pipes can fill a tank with water in 15 and 12 hours respectively and a third pipe can empty it in 4 hours. If the pipes be opened in order, at 8, 9 and 11 a.m. respectively, the tank will be emptied at:
(a) 11:40 a.m. (b) 12:40 p.m.
(c) 1:40 p.m. (d) 2:40 p.m.
95. The percentage of loss when an article is sold at ₹ 50 is the same as that of the profit when it is sold at ₹ 70. The above-mentioned percentage of profit or loss on the article is:
(a) 10% (b) $16\frac{2}{3}\%$
(c) 20% (d) $22\frac{2}{3}\%$
96. A radio is sold for ₹ 990 at a profit of 10%. What would have been the actual profit or loss on it, had it been sold for ₹ 890?
(a) ₹ 10 loss (b) ₹ 10 profit
(c) ₹ 90 loss (d) ₹ 90 profit
97. If an article is sold at a gain of 5% instead of being sold at a loss of 5% one gets ₹ 5 more. What is the cost price of the article?
(a) ₹ 100 (b) ₹ 105
(c) ₹ 50 (d) ₹ 110
98. Ravi buys some toffees at 2 for a rupee and sells them at 5 for a rupee. His loss per cent is:
(a) 120 (c) 90
(b) 30 (d) 60
99. Raghavan purchased a scooter at $\frac{13}{15}$ of its selling price and sold it at 12% more than its selling price. His gain is:
(a) 20% (b) 30%
(c) $38\frac{3}{30}\%$ (d) $29\frac{3}{13}\%$

RRB (Assistant Loco Pilot) 2013 Exam

100. A person sold two pipes at ₹ 12 each. His profit on one was 20% and his loss on the other was 20%. On the whole, he:
(a) Neither loss nor gained
(b) Gained ₹ 1
(c) Lost ₹ 1
(d) Gained ₹ 2
101. A car travelling with $\frac{5}{7}$ of its usual speed covers 42 km in 1 hr 40 min 48 sec. What is the usual speed of the car?
(a) $17\frac{6}{7}$ km/hr (b) 35 km/hr
(c) 25 km/hr (d) 30 km/hr
102. A and B run a kilometre and A wins by 25 sec. A and C run a kilometre and 'A' wins by 275 m. When B and C run the same distance, B wins by 30 sec. The time taken by A to run a kilometre is:
(a) 2 min 25 sec (b) 2 min 50 sec
(c) 3 min 20 sec (d) 3 min 30 sec
103. A train passes a man standing on a platform in 8 seconds and also crosses the platform which is 264 metres long in 20 seconds. The length (in metres) of the train is:
(a) 188 (b) 176
(c) 175 (d) 96
104. A boat goes 8 km in one hour along the stream and 2 km in one hour against the stream. The speed (in km/hr) of the stream is:
(a) 2 (b) 3
(c) 4 (d) 5
105. Walking at three-fourth of his usual speed, a man covers a certain distance in 2 hours more than the time he takes to cover the distance at his usual speed. The time taken by him to cover the same distance with his usual speed is:
(a) 4.5 hr. (b) 5.5 hr.
(c) 6 hr. (d) 5 hr.
106. In a certain code SHIFT is written as 37\$%5 and RATE is written as #★59. How is FIRST written in that code?
(a) % \$★ 37 (b) % \$# 57
(c) ★\$ # 35 (d) None of these
107. In a certain code COMPUTE is written as FSVONND. How is DISTURB written in that code?
(a) CSVSTHE (b) CQVSTHE
(c) CQVTSHE (d) CSVTSHE
108. Pointing to a photograph Vinod said 'She is the daughter of my wife's mother's only daughter'. How is Vinod related to the girl in the photograph?
(a) Cousin (b) Uncle
(c) Father (d) Cannot be determined
109. How many such pairs of letters are there in the word FUNCTIONAL, each of which has as many letters between them in the word as they have in the English alphabet?
(a) NIL (b) One
(c) Two (d) More than three

ANSWER KEY											
1	(a)	21	(a)	41	(c)	61	(d)	81	(c)	101	(b)
2	(d)	22	(a)	42	(a)	62	(a)	82	(a)	102	(a)
3	(a)	23	(c)	43	(a)	63	(c)	83	(a)	103	(b)
4	(d)	24	(d)	44	(b)	64	(a)	84	(d)	104	(b)
5	(d)	25	(d)	45	(d)	65	(a)	85	(c)	105	(c)
6	(c)	26	(a)	46	(c)	66	(c)	86	(c)	106	(d)
7	(a)	27	(c)	47	(a)	67	(c)	87	(b)	107	(b)
8	(d)	28	(b)	48	(d)	68	(b)	88	(a)	108	(c)
9	(a)	29	(a)	49	(c)	69	(c)	89	(d)	109	(d)
10	(c)	30	(c)	50	(d)	70	(a)	90	(d)	110	(d)
11	(b)	31	(c)	51	(a)	71	(d)	91	(a)	111	(b)
12	(a)	32	(b)	52	(b)	72	(c)	92	(a)	112	(b)
13	(d)	33	(b)	53	(d)	73	(a)	93	(c)	113	(d)
14	(b)	34	(d)	54	(c)	74	(a)	94	(d)	114	(b)
15	(c)	35	(c)	55	(a)	75	(b)	95	(b)	115	(d)
16	(d)	36	(a)	56	(d)	76	(a)	96	(a)	116	(d)
17	(a)	37	(c)	57	(c)	77	(b)	97	(c)	117	(b)
18	(d)	38	(b)	58	(c)	78	(b)	98	(d)	118	(a)
19	(b)	39	(a)	59	(b)	79	(d)	99	(d)	119	(a)
20	(c)	40	(a)	60	(b)	80	(b)	100	(c)	120	(d)

HINTS AND SOLUTIONS

10. (c) Here $u = \sqrt{2gh} = \sqrt{2 \times 9.8 \times 10} = \sqrt{196} = 14$ m/sec.

23. (b) Speed = 45 kmph = $45 \times \frac{5}{18} = 12.5$ m/s

Let, length of the bridge = x m; then $\frac{130+x}{12.5} = 30$

$$\Rightarrow 130+x=375$$

$$\therefore x=375-130=245 \text{ m.}$$

24. (d) Let, C.P. ₹ = 100; then

S.P. with gain 10% = ₹ 110

But when S.P. = $2 \times ₹ 110 = ₹ 220$

Gain = $220 - 100 = ₹ 120$

$$\therefore \text{Gain \%} = \frac{120 \times 100}{100} = 120\%$$

29. (a) Let radius and height of a cone are $5x$ and $12x$ cm

respectively; then $\frac{1}{3} \times \pi \times (5x)^2 \times 12x = 314$

$$\Rightarrow 3.14 \times 25x^2 \times 4x = 314$$

$$\Rightarrow x^3 = \frac{314}{314} = 1$$

$$\therefore x = 1$$

Since, radius and height will be 5 cm and 12cm. Now, slant height,

$$l = \sqrt{h^2 + r^2} = \sqrt{(12)^2 + (5)^2} = \sqrt{169} = 13 \text{ cm}$$

30. (d) C.P. of 50 pencils = ₹ 100

$$\therefore \text{C.P. of 45 pencils} = \frac{100}{50} \times 45 = ₹ 90$$

= S.P. of 45 pencils

∴ No gain, No loss

89. (d) Let, principal be ₹ x then amount will be $2x$; then S.I. = $2x - x = ₹ x$

$$\text{Time} = \frac{x \times 100}{x \times 20} = 5 \text{ years.}$$

92. (a) Work of (1 man + 1 women + 1 boy) for 1 day = $\frac{1}{3}$

$$\therefore \text{Work of 1 man for 1 day} = \frac{1}{6}$$

$$\text{and work of 1 boy for 1 day} = \frac{1}{18}$$

$$\therefore \text{Work of 1 women for 1 day} = \frac{1}{3} - \frac{1}{6} - \frac{1}{18} = \frac{1}{9}$$

Hence woman alone will complete the work in 9 days.

93. (c) Let the time taken by B alone to complete the work be x days.

∴ Time taken by A to complete

$$\frac{1}{2} \text{ work} = \frac{x}{6} \text{ days}$$

$$\therefore \text{Work of A for 1 day} = \frac{1}{2} \times \frac{6}{x} = \frac{3}{x}$$

and Work of B for 1 day = $\frac{1}{x}$

$$\Rightarrow \frac{3}{x} + \frac{1}{x} = \frac{1}{10}$$

$$\Rightarrow \frac{4}{x} = \frac{1}{10}$$

$$x = 40 \text{ days}$$

94. (d) Let the tank will be emptied at x a.m.

$$\text{Tank filled by first pipe} = \frac{1}{15} \times (x - 8)$$

$$\text{Tank filled by second pipe} = \frac{1}{12} \times (x - 9)$$

$$\text{and tank emptied by third pipe} = \frac{1}{4} \times (x - 11)$$

$$\therefore \frac{x-8}{15} + \frac{x-9}{12} = \frac{x-11}{4}$$

$$\Rightarrow \frac{4x-32+5x-45}{60} = \frac{x-11}{4}$$

$$\Rightarrow 9x - 77 = 15x - 165$$

$$\Rightarrow 6x = 88$$

$$\therefore x = \frac{88}{6} = 14\frac{2}{3}$$

i.e. 2 : 40 p.m.

95. (b) Let percentage of profit or loss on the article be x

$$\therefore \frac{50 \times 100}{100 - x} = \frac{70 \times 100}{100 + x}$$

$$\Rightarrow 5000(100+x) = 7000(100-x)$$

$$\Rightarrow 500 + 5x = 700 - 7x$$

$$\Rightarrow 12x = 200$$

$$\therefore x = \frac{200}{12} = 16\frac{2}{3}\%$$

96. (a) $\because \text{C.P. of radio} = \frac{990 \times 100}{(100+10)} = \text{₹}900$

$$\therefore \text{Actual loss} = 900 - 890 = \text{₹}10$$

97. (c) $\text{C.P. of the article} = \text{₹} \frac{c \times 100}{(a+b)}$

(Here $a = 5$, $b = 5$ and $c = 5$)

$$= \frac{5 \times 100}{(5+5)} = \text{₹}50$$

98. (d) $\text{C.P. of 1 toffee} = \text{₹} \frac{1}{2}$

$$\text{and S.P. of 1 toffee} = \text{₹} \frac{1}{5}$$

$$\therefore \text{Reqd. loss \%} = \frac{\left(\frac{1}{2} - \frac{1}{5}\right) \times 100}{\frac{1}{2}} \\ = \frac{3}{10} \times 100 \times 2 = 60\%$$

99. (d) Let S.P. of the Scooter be ₹ x

$$\therefore \text{C.P. of the Scooter} = \text{₹} \frac{13x}{15}$$

$$\text{and S.P. of the Scooter} = \text{₹} \frac{112 \times x}{100}$$

$$\therefore \text{Gain \%} = \left(\frac{12x}{100} - \frac{13x}{15} \right) \times \frac{100 \times 5}{13x} \% \\ = \frac{336x - 260x}{300} \times \frac{1500}{13x} \% = 29\frac{3}{13}\%$$

100. (c) $\because \text{C.P. of first pipe} = \frac{12 \times 100}{(100+20)} = \text{₹}10$

$$\Rightarrow \text{C.P. of second pipe} = \frac{12 \times 100}{(100-20)} = \text{₹}15$$

$$\Rightarrow \text{C.P. of both the pipes} = 10 + 15 = \text{₹}25$$

$$\Rightarrow \text{S.P. of both the pipes} = 12 + 12 = \text{₹}24$$

$$\therefore \text{Loss on the whole} = 25 - 24 = \text{₹}1$$

101. (b) Usual speed of the car = $\frac{\frac{42}{42} \times \frac{7}{5}}{25}$

$$= \frac{42 \times 7 \times 25}{42 \times 5} = 35 \text{ km/hr}$$

103. (b) Let the length of train be x meters

$$\therefore \frac{x}{8} = \frac{x+264}{20}$$

$$\Rightarrow 20x = 8x + 2112$$

$$\Rightarrow 12x = 2112$$

$$\therefore x = \frac{2112}{12} = 176 \text{ meters}$$

104. (b) Speed of the stream = $\frac{8-2}{2} = 3 \text{ km/hr}$

105. (c) Let the usual speed be x km/hr and time taken by usual speed by y hour

$$\therefore x \times y = \frac{3}{4}x(y+2)$$

$$\Rightarrow 4xy = 3xy + 6x$$

$$\Rightarrow xy = 6x$$

$$\therefore y = 6 \text{ hours}$$

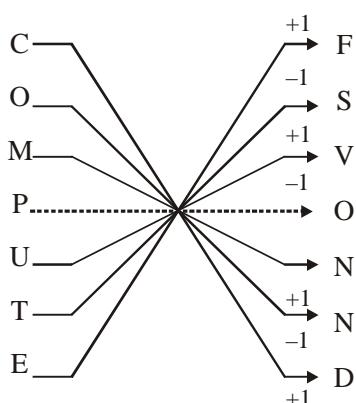
106. (d) As, SHIFT → 3 7 \$ % 5

and RATE → # * 5 9

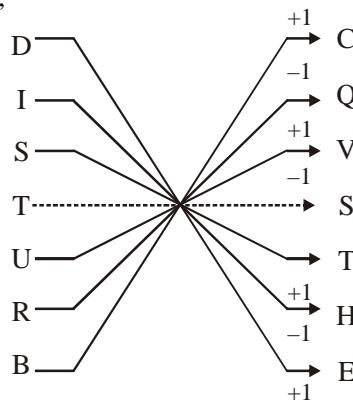
Similarly

FIRST → % \$ # 3 5

107. (b)



Similarly,



108. (c) The only daughter of Vinod's wife's mother is the wife of Vinod and the daughter of Vinod's wife is daughter of Vinod. Hence Vinod is the father of the girl in the photograph.

109. (d) 

Hence, required pairs are: F – C, O – N, N – L, O – L

110. (d) Hence, sky means cloud, Hence the Birds fly in the cloud.

SECTION A : ARITHMETIC

CHAPTER

1

Number System, HCF and LCM

The ten symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 are called *digits*, which can represent any number.

Real numbers: Real numbers comprise the full spectrum of numbers. They can take on any form – fractions or whole numbers, decimal points or no decimal points. The full range of real numbers includes decimals that can go on forever and ever without end.

For Example: $8, 6, 2 + \sqrt{3}, \frac{3}{5}$ etc.

Natural numbers: A natural number is a number that comes naturally. Natural Numbers are counting numbers from 1, 2, 3, 4, 5,

Whole numbers: Whole numbers are just all the natural numbers plus zero.

For Example: 0, 1, 2, 3, 4, 5, and so on upto infinity.

Integers: Integers incorporate all the qualities of whole numbers and their opposites (or additive inverses of the whole numbers). Integers can be described as being positive and negative whole numbers.

For Example: ... -3, -2, -1, 0, 1, 2, 3, ...

Rational numbers: All numbers of the form $\frac{p}{q}$ where p and q are integers ($q \neq 0$) are called Rational numbers.

For Example: $4, \frac{3}{4}, 0, \dots$

Irrational numbers: Irrational numbers are the opposite of rational numbers. An irrational number cannot be written as a fraction, and decimal values for irrational numbers never end and do not have a repeating pattern in them. 'pi' with its never-ending decimal places, is irrational.

For Example: $\sqrt{7}, \sqrt{5}, 2 + \sqrt{2}, \pi, \dots$

Even numbers: An even number is one that can be divided evenly by two leaving no remainder, such as 2, 4, 6, and 8.

Odd numbers: An odd number is one that does not divide evenly by two, such as 1, 3, 5, and 7.

Prime numbers: A prime number is a number which can be divided only by 1 and itself. The prime number has only two factors, 1 and itself.

For example: 2, 3, 5, 7, 11, 13, 17, are prime numbers.

Composite Number: A Composite Number is a number which can be divided into a number of factors other than 1 and itself. Any composite number has additional factors than 1 and itself.

For example: 4, 6, 8, 9, 10

Co-primes or Relatively prime numbers: A pair of numbers not having any common factors other than 1 or -1. (Or alternatively their greatest common factor is 1 or -1)

For Example: 15 and 28 are co-prime, because the factors of 15 (1,3,5,15), and the factors of 28 (1,2,4,7,14,28) are not in common (except for 1).

Twin Primes: A pair of prime numbers that differ by 2 (successive odd numbers that are both Prime numbers).

For Example: (3,5), (5,7), (11,13), ...

Place value : Place value is a positional system of notation in which the position of a number with respect to a point determines its value. In the decimal system, the value of the digits is based on the number ten.

Each position in a decimal number has a value that is a power of 10. A decimal point separates the non-negative powers of 10, $(10)^0=1, (10)^1=10, (10)^2=100, (10)^3=1000$, etc.) on the left from the

negative powers of 10, $(10)^{-1}=\frac{1}{10}, (10)^{-2}=\frac{1}{100}, (10)^{-3}=\frac{1}{1000}$, etc.) on the right.

Face value : The face value of a number is the value of the number without regard to where it is in another number. So 4 7 always has a face value of 7. However the place value includes the position of the number in another number. So in the number 4,732, the 7 has a place value of 700, but has a face value of just 7.

EXAMPLE ▶ 1 : Place and face values of the digits in the number 495,784:

Number	Digit	Place value	Face value
495,784	4	400000	4
	9	90000	9
	5	5000	5
	7	700	7
	8	80	8
	4	4	4

FRACTIONS

A fraction is known as a rational number and written in the form

of $\frac{p}{q}$ where p and q are integers and $q \neq 0$. The lower number

' q ' is known as denominator and the upper number ' p ' is known as numerator.

Number System, HCF and LCM

Sol. (c) Remaining homework on Monday night

$$= 1 - \frac{3}{5} = \frac{2}{5}$$

Work done on Tuesday night

$$= \frac{1}{3} \text{ of } \frac{2}{5} = \frac{2}{15}$$

Remaining homework to complete the biology

$$\text{assignment} = \frac{2}{5} - \frac{2}{15} = \frac{6-2}{15} = \frac{4}{15}$$

EXAMPLE ▶ 6 :

- (a) Write 21.3751 upto two places of decimal.
- (b) Write 3.27645 upto three places of decimal.

Sol. (a) $21.3751 = 21.38$

(b) $3.27645 = 3.276$

DECIMALS

1. The decimal expansion of a rational number is either terminating or non-terminating recurring. Moreover, a number whose decimal expansion is **terminating or non-terminating recurring** is rational.
2. The decimal expansion of an irrational number is **non-terminating non recurring**. Moreover, a number whose decimal expansion is non-terminating non recurring is irrational.

For example : $\sqrt{2} = 1.41421356237309504880\dots$

$\pi = 3.1415926535897932384626433\dots$

EXAMPLE ▶ 7 :

Find an irrational number between $\frac{1}{7}$ and $\frac{2}{7}$.

Sol. We find by dividing, $\frac{1}{7} = 0.\overline{142857}$ and $\frac{2}{7} = 0.\overline{285714}$.

DIVISIBILITY RULES

Divisibility by 2 : A number is divisible by 2 if its unit's digit is even or 0.

Divisibility by 3 : A number is divisible by 3 if the sum of its digits are divisible by 3.

Divisibility by 4 : A number is divisible by 4 if the last 2 digits are divisible by 4, or if the last two digits are 0's.

Divisibility by 5 : A number is divisible by 5 if its unit's digit is 5 or 0.

Divisibility by 6 : A number is divisible by 6 if it is simultaneously divisible by 2 and 3.

Divisibility by 7 : A number is divisible by 7 if unit's place digit is multiplied by 2 and subtracted from the remaining digits and the number obtained is divisible by 7.

Divisibility by 8 : A number is divisible by 8 if the last 3 digits of the number are divisible by 8, or if the last three digits of a number are zeros.

Divisibility by 9 : A number is divisible by 9 if the sum of its digits is divisible by 9.

Divisibility by 10 : A number is divisible by 10 if its unit's digit is 0.

Divisibility by 11 : A number is divisible by 11 if the sum of digits at odd and even places are equal or differ by a number divisible by 11.

Divisibility by 12 : A number is divisible by 12 if the number is divisible by both 4 and 3.

Divisibility by 13 : A number is divisible by 13 if its unit's place digit is multiplied by 4 and added to the remaining digits and the number obtained is divisible by 13.

Divisibility by 14 : A number is divisible by 14 if the number is divisible by both 2 and 7.

Divisibility by 15 : A number is divisible by 15 if the number is divisible by both 3 and 5.

EXAMPLE ▶ 8 :

Is 473312 divisible by 7?

Sol. $473312 - 2 \times 2 = 47327$

$$4732 - 2 \times 7 = 4718$$

$$471 - 2 \times 8 = 455$$

$$45 - 2 \times 5 = 35$$

35 is divisible by 7, therefore, 473312 is divisible by 7.

EXAMPLE ▶ 9 : What is the value of M and N respectively if M39048458N is divisible by 8 and 11, where M and N are single digit integers?

- | | |
|----------|----------|
| (a) 7, 4 | (b) 8, 6 |
| (c) 6, 4 | (d) 3, 2 |

Sol. (c) A number is divisible by 8 if the number formed by the last three digits is divisible by 8.
i.e., 58N is divisible by 8.

Clearly, N = 4

Again, a number is divisible by 11 if the difference between the sum of digits at even places and sum of digits at the odd places is either 0 or is divisible by 11.

$$\text{i.e. } (M + 9 + 4 + 4 + 8) - (3 + 0 + 8 + 5 + N)$$

$$= M + 25 - (16 + N)$$

$$= M - N + 9 \text{ must be zero or it must be divisible by 11}$$

$$\text{i.e. } M - N = 2$$

$$\Rightarrow M = 2 + 4 = 6$$

$$\text{Hence, } M = 6, N = 4$$

DIVISIONALGORITHM :

$$\text{Dividend} = (\text{Divisor} \times \text{Quotient}) + \text{Remainder}$$

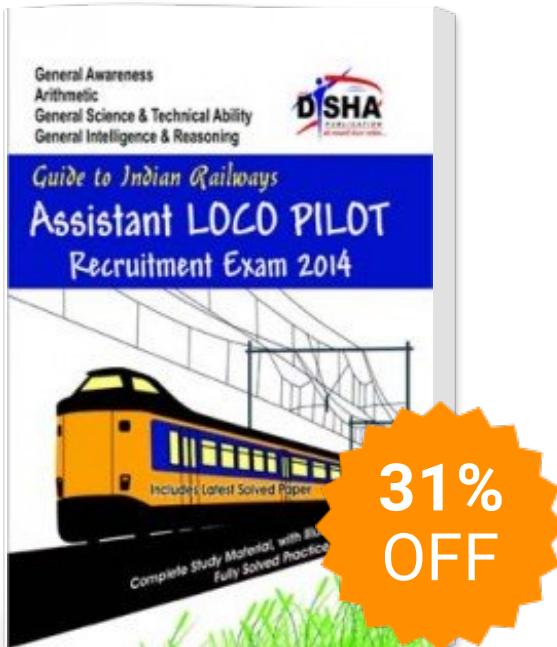
where, Dividend = The number which is being divided

Divisor = The number which performs the division process

Quotient = Greatest possible integer as a result of division

Remainder = Rest part of dividend which cannot be further divided by the divisor.

Guide to Indian Railways Assistant Loco Pilot Recruitment Exam 2014



Publisher : Disha Publication

ISBN : 9789383379286

Author : Disha Publication

Type the URL : <http://www.kopykitab.com/product/3667>



Get this eBook