



SAMPLE PRACTICE SET - 01
ELEMENTARY MATHEMATICS

- The value of the expression $\frac{(1\frac{29}{36} + 4\frac{1}{8} \times 1\frac{7}{11}) \div (5\frac{1}{9} - 7\frac{7}{8} \div 9\frac{9}{20})}{3\frac{1}{5} \div \frac{9}{2} \text{ of } 5\frac{1}{3}}$ is
 - $\frac{2}{15}$
 - 2
 - $7\frac{1}{2}$
 - 15
- Let x be the greatest number of 4 digits, which when divided by 15, 20 and 28 leaves in each case the remainder 2. The sum of digits of x is
 - 19
 - 21
 - 23
 - 25
- When 13511, 13903 and 14589 are divided by the greatest number 'n', the remainder in each case is 'm'. The value of $(n+m)$ is
 - 183
 - 182
 - 181
 - 179
- Suman saves 10% of her monthly salary. Now her expenditure increases by 30% and savings increases by 50%. The present increase in her salary is
 - 25%
 - 30%
 - 32%
 - 40%
- The marked price of an article is 20% more than the cost price. If the article is sold at a discount of 15% on its market price, then the gain percent is
 - 5
 - $4\frac{1}{2}$
 - $2\frac{1}{2}$
 - 2
- The number of children in a camp is x and their average weight is 20 kg. If 5 children each weighing 12 kg join the camp or if 10 children each

weighing 21 kg leave the camp, the average weight in both the cases remain the same. The value of x is

- (a) 18
 - (b) 16
 - (c) 15
 - (d) 14
7. Four pipes A, B, C and D can fill a tank with water in 15, 20, 30 and 60 hours respectively. Pipe A is opened at 4 a.m., B at 5 a.m., C at 6 a.m. and D at 7 a.m. When is the tank filled up completely?
- (a) 9:30 am
 - (b) 10:00 am
 - (c) 10:30 am
 - (d) 11:00 am
8. Three fair dice are thrown simultaneously. What is the probability that the sum of numbers on their tops, is at least 6?
- (a) $\frac{5}{108}$
 - (b) $\frac{1}{24}$
 - (c) $\frac{103}{108}$
 - (d) $\frac{17}{18}$
9. Two cards are drawn together from a pack of 52 cards. The probability that one is a club and one is a diamond, is
- (a) $\frac{13}{102}$
 - (b) $\frac{46}{104}$
 - (c) $\frac{12}{21}$
 - (d) $\frac{13}{200}$
10. A certain sum of money amounts to Rs. 1,008 in 2 years and to Rs. 1,164 in $3\frac{1}{2}$ years. Find the sum and the rate of interest.
- (a) Rs. 900 and 12%
 - (b) Rs. 800 and 12%
 - (c) Rs. 700 and 13%
 - (d) Rs. 800 and 13%
11. A wheel that has 6 cogs is meshed with a larger wheel of 14 cogs. When the smaller wheel has made 21 revolutions, then the number of revolutions made by the larger wheel is
- (a) 7
 - (b) 9
 - (c) 14
 - (d) 42

12. A wooden almirah is sold at a certain price. By selling it at $\frac{2}{3}$ of that price one loses 10%, Find the profit per cent at the original price.
- (a) 15%
 - (b) 25%
 - (c) 35%
 - (d) 45%
13. What number will come next?
 $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \dots\dots\dots$
- (a) $\frac{1}{16}$
 - (b) $\frac{1}{10}$
 - (c) $\frac{1}{12}$
 - (d) 1
14. The sum of three numbers is 132. If the first number be twice the second and third number be one-third of the first, then the second number is
- (a) 32
 - (b) 36
 - (c) 48
 - (d) 60
15. The average weight of 14 students was calculated as 71. But it was later found that the weight of one student had been wrongly entered as 42 instead of 56 and of another as 74 instead of 32. The correct average is
- (a) 75
 - (b) 80
 - (c) 68
 - (d) 69
16. The average price of 10 pens is Rs. 12 while the average price of 8 of these pens is Rs. 11.75. Of the remaining two pens, if the price of one pen is 60% more than the price of the other, what is the price of each of these two pens?
- (a) Rs. 12, Rs. 14
 - (b) Rs. 5, Rs. 7.50
 - (c) Rs. 8, Rs. 12
 - (d) Rs. 10, Rs. 16
17. Three maths classes: X, Y and Z take an algebra test. The average score of class X is 83. The average score of class Y is 76. The average score of class Z is 85. The average score of class X and Y is 79 and average score of class Y and Z is 81. What is the average score of classes X, Y and Z?
- (a) 81.5
 - (b) 80.5
 - (c) 83
 - (d) 78

18. A vessel contains a mixture of milk and water in the ratio of 5 : 3 respectively. How much of the mixture must be siphoned off and replaced with water, so that the mixture may be half milk and half water?
- (a) $\frac{1}{5}$
(b) $\frac{1}{4}$
(c) $\frac{1}{3}$
(d) $\frac{1}{7}$
19. Two trains, one from Howrah to Patna and other from Patna to Howrah, start simultaneously. After they meet, the trains reach their destinations after 9 hours and 16 hours respectively. The ratio of their speed is.....
- (a) 2:03
(b) 4:03
(c) 6:07
(d) 9:06
20. Sum of two different positive integers is 11 and the sum of their squares is 61. What is the ratio of these integers?
- (a) 1:2
(b) 5:2
(c) 5:6
(d) 3:2
21. Reema, Ruchi and Richa can make a painting in 15, 20 and 30 days, respectively. They undertake to make a painting for Rs. 810. The share of Reema exceeds that of Ruchi by
- (a) Rs. 91
(b) Rs. 92
(c) Rs. 90
(d) Rs. 89
22. Ram can do a work in 60 days and the same work Sohan can finish in 40 days. If both of them work together, then in how many days will the work be over?
- (a) 24
(b) 32
(c) 50
(d) 100
23. A watch which gains uniformly is 2 minutes slow at noon on Monday and is 4 minutes 48 second fast at 2p.m. on the following Monday. When was it correct?
- (a) 2 p.m. on Tuesday
(b) 2 p.m. on Wednesday
(c) 3 p.m. on Thursday
(d) 1 pm on Friday

24. A train running at the rate of 40 km/h passes a man riding parallel to the railway line in the same direction at 25 km/h in 48 seconds. Find the length of the train in metres.
- (a) 100 m
 - (b) 200 m
 - (c) 150 m
 - (d) 250 m
25. A goods train is 800 meters long and it is running at a constant speed of 60 km/per hour. If it takes 120 seconds to pass a bridge, then calculate the length of the bridge?
- (a) 1450
 - (b) 1200
 - (c) 1600
 - (d) 1800
26. A man can row 14 km/h in still water. In the stream flowing with the speed of 10 km/h he takes 4 hours to move with the stream and come back. Find the distance he rowed the boat.
- (a) 11.71 km
 - (b) 13.71 km
 - (c) 14.71 km
 - (d) 12.71 km
27. A man covers a certain distance between his house and office on a Scooter. Having an average speed of 30 km/hr, he reaches office late by 10 minutes. However, with a speed of 40 km/hr, he reaches his office 5 minutes earlier. The distance between his house and office is
- (a) 30 km
 - (b) 10 km
 - (c) 20 km
 - (d) 40 km
28. A shirt was sold at a profit of 15%. If its cost had been 5% less and it had been sold for Rs. 21 less, then profit would have been 10%. Find the cost of the shirt.
- (a) Rs. 210
 - (b) Rs. 220
 - (c) Rs. 100
 - (d) Rs. 200
29. A man bought 2 pens for Rs. 65. He sold one of them at a gain of 7% and other at a loss of 6%. On the whole, he neither gained nor suffered loss. The cost of the pens were respectively
- (a) Rs. 35, Rs. 30
 - (b) Rs. 32, Rs. 33
 - (c) Rs. 33, Rs. 32
 - (d) Rs. 30, Rs. 35

30. A and B started a business with a total capital of Rs. 30,000. At the end of the year they shared the profit in the ratio of their investments. If their capitals were interchanged, then A would have received 175% more than what he actually received. Find out the capital of B.
- (a) Rs. 20,000
 - (b) Rs. 22,000
 - (c) Rs. 21,000
 - (d) Rs. 23,000
31. A man buys an article and sells it at a loss of 10%. Had he bought it for 20% less and sold it for Rs. 55 more, he would have made a profit of 40%. The cost price of the article is:
- (a) Rs. 200
 - (b) Rs. 225
 - (c) Rs. 250
 - (d) Rs. 300
32. The cost prices of two types of tea are Rs. 180 per kg. and Rs. 200 per kg. respectively. On mixing them in the ratio of 5 : 3, the mixture is sold at Rs. 210 per kg. In the whole transaction, the gain percentage is:
- (a) 10%
 - (b) 11%
 - (c) 20%
 - (d) 12%
33. What will be the difference in simple and compound interest on Rs. 2,000 after three years at the rate of 10 percent per annum?
- (a) Rs. 60
 - (b) Rs. 42
 - (c) Rs. 62
 - (d) Rs. 40
34. A certain sum of money was deposited in a bank and it become two-fold in 10 years. What is the rate of simple interest?
- (a) 8%
 - (b) 10%
 - (c) 12%
 - (d) 13%
35. In an office, $\frac{1}{3}$ of the workers are Men, $\frac{1}{2}$ of the men are married and $\frac{1}{3}$ of the married men have children. If $\frac{3}{4}$ of the women are married and $\frac{2}{3}$ of the $\frac{2}{3}$ of the married women have children, then the part of workers without children are:
- (a) $\frac{5}{18}$
 - (b) $\frac{4}{9}$
 - (c) $\frac{17}{36}$
 - (d) $\frac{11}{18}$

36. A box contains Rs. 56 in the form of coins of one rupee, 50 paisa and 25 paisa. The number of 50 paisa coins is double the number of 25 paisa coins and four times the number of one rupee coins. The number of 50 paisa coin in the box is
- (a) 14
 - (b) 16
 - (c) 32
 - (d) 64
37. A die is rolled twice. What is the probability that the sum of the numbers on the two faces is 5?
- (a) $\frac{3}{13}$
 - (b) $\frac{4}{13}$
 - (c) $\frac{6}{13}$
 - (d) $\frac{1}{9}$
38. A box contains 24 marbles, some are green and others are blue. If a marble is drawn at random from the jar the probability that it is green is $\frac{2}{3}$. The number of blue balls in the jar is:
- (a) 13
 - (b) 12
 - (c) 16
 - (d) 8
39. You can collect rubies and emeralds as many as you can. Each ruby is worth Rs. 4 crore and each emerald is worth of Rs. 5 crore. Each ruby weights 0.3 kg and each emeralds weights 0.4 kg. Your bag can carry at the most 12 kg. What you should collect to get the maximum wealth?
- (a) 20 rubies and 15 emeralds
 - (b) 40 rubies
 - (c) 28 rubies-and 9 emeralds
 - (d) none of these
40. Population of a city is 2,96,000 out of which 1,66,000 are males. 50% population is literate. If 70% males are literate, then the number of women who are literate is
- (a) 48,000
 - (b) 66,400
 - (c) 32,200
 - (d) 31,800
41. In a certain class, 72% of the students prefer cold coffee and 44% prefer fruit juice. If each of them prefers cold coffee or fruit juice and 48 likes both, the total number of students in the class is
- (a) 240
 - (b) 200
 - (c) 300
 - (d) 250

42. Fresh grapes contain 90% water by weight white dried grapes contain 20% water by weights. What is the weights of dry grapes available from 20kg of fresh grapes?
- (a) 2 kg
 - (b) 2.4 kg
 - (c) 2.5 kg
 - (d) 2.6 kg
43. Mohan credits 15% of his salary into his bank and spends 30% of the remaining amount on household articles. If cash on hand is Rs. 2,380 what is his salary?
- (a) Rs. 5,000
 - (b) Rs. 4,500
 - (c) Rs. 4,000
 - (d) Rs. 3,500
44. Ten points are marked on a straight line and 11 points are marked on another straight line. How many triangles can be constructed with vertices from among the above points?
- (a) 495
 - (b) 550
 - (c) 1045
 - (d) 2475
45. A square field has its area equal to 324 m^2 . The perimeter of the field is
- (a) 36 m
 - (b) 72 m
 - (c) 18 m
 - (d) 6561 m
46. A ground $100 \times 80 \text{ in}^2$ has two cross roads in its middle. The road parallel to the length is 5 metre wide and the other road is 4 metre wide, both roads are perpendicular to each other. The cost of laying the bricks at the rate of Rs. 10 per m^2 , on the roads, will be:
- (a) Rs. 700
 - (b) Rs. 8,000
 - (c) Rs. 900
 - (d) Rs. 1,000
47. When $2\frac{1}{2}$ is added to a number and the sum is multiplied by $4\frac{1}{2}$ and then 3 is added to the product and then the sum is divided by $1\frac{1}{5}$, the quotient becomes 25. What is that number?
- (a) $2\frac{1}{2}$
 - (b) $3\frac{1}{2}$
 - (c) $4\frac{1}{2}$
 - (d) $5\frac{1}{2}$

48. The number of units sold by Company D in the year 2006 is what percent of the number of units manufactured by it in that year? (*rounded off to two digits after decimal*)
- (a) 52.63
 - (b) 61.57
 - (c) 85.15
 - (d) 73.33
49. The sum of ages of a mother and daughter is 45 years. Five years ago, the product of their ages was four times the mother's age at that time. The present age of the mother is
- (a) 38 years
 - (b) 37 years
 - (c) 36 years
 - (d) 39 years
50. Diagonals of a rhombus are 1 metre and 1.5 metre in lengths. The area of the rhombus is:
- (a) 0.75 m^2
 - (b) 1.5 m^2
 - (c) 2.5 m^2
 - (d) 0.375 m^2



SAMPLE PRACTICE SET - 01
ELEMENTARY MATHEMATICS

ANSWER KEY

1	d	11	b	21	c	31	c	41	c
2	c	12	c	22	a	32	d	42	c
3	a	13	a	23	b	33	c	43	c
4	c	14	b	24	b	34	b	44	c
5	d	15	d	25	b	35	d	45	b
6	c	16	d	26	b	36	d	46	b
7	d	17	a	27	a	37	d	47	b
8	c	18	a	28	d	38	d	48	d
9	a	19	b	29	d	39	b	49	c
10	d	20	c	30	b	40	d	50	a