Dr M. K. K Arya Model School

Time : 40 minutes **Class VIII (Mathematics) (Sep-2021)** **M.M = 20**

Question 1 to 10 carry 1 mark each.
Question 11 to 12 carry 2 mark each.
Question 13 to 14 carry 3 mark each.

Part –A

1. Two numbers are in the ratio 5 : 3. If they differ by 18. Find the numbers

   (i) 50, 32 (ii) 5,3 (iii) 45,27 (iv) 30, 12

2. Multiply $\frac{6}{13}$ by the reciprocal of $-\frac{7}{16}$

   (i) $-\frac{42}{208}$ (ii) $-\frac{96}{91}$ (iii) $-\frac{208}{42}$ (iv) $\frac{96}{92}$

3. Find the smallest number by which 135 must be divided so as to get a perfect cube.

   (i) 25 (ii) 3 (iii) 5 (iv) 15

4. Sohan bought a second hand cell phone for Rs 2500, then spent Rs 500 on its repairs and sold it for Rs 3300. Find the gain or loss

   (i) Gain of Rs 800 (ii) Loss of Rs 800 (iii) Gain of Rs 300 (iv) Loss of Rs 300

5. Which of the following is a perfect square and also a perfect cube?

   (i) 144 (ii) 125 (iii) 16 (iv) 64

6. Find: $\sqrt{64} \times \sqrt{144}$

   (i) 20 (ii) 86 (iii) 96 (iv) 108

7. A bag contains 8 red, 4 black and 3 white balls. A ball is drawn from the bag. Find the probability of getting a black ball.

   (i) $\frac{4}{15}$ (ii) $\frac{11}{15}$ (iii) $\frac{1}{15}$ (iv) 1

8. 72% of 25 students are interested in mathematics. how many are not interested in mathematics?

   (i) 18 (ii) 28 (iii) 7 (iv) 6

9. In a parallelogram GUNS, $\angle G$ = 85°. Find the measure of $\angle N$

   (i) 105° (ii) 95° (iii) 85° (iv) 115°

10. $-\frac{7}{8} - \left(\frac{-3}{5}\right)$ is

    (i) $-\frac{10}{40}$ (ii) $-\frac{11}{40}$ (iii) $-\frac{59}{40}$ (iv) $\frac{11}{40}$

11. Present age of Anu and Raj are in 4 : 5. 8 years from now the ratio of their ages will be 5 : 6. Find their present ages.

12. Draw a parallelogram ABCD in which AB = 6.5 cm and BC = 4 cm and $\angle B$ = 105° .

13. Draw a histogram to represent the frequency distribution of Daily Income of 445 workers of a factory.

Daily Income (In Rs)	100-125	125-150	150-175	175-200	200-225	225-250
Frequency	45	25	55	125	140	55

14. Find: $\frac{3}{7} + \left(-\frac{6}{11}\right) + \left(-\frac{8}{21}\right) + \left(\frac{5}{22}\right)$

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Part –B

1. Which of these is greater than -2 ?
   (i) -1 (ii) -3 (iii) -4 (iv) none of these
2. Number of times a particular entry occurs is called _____.
   (i) Data (ii) Range (iii) Frequency (iv) Width
3. Diagonals of _____ are perpendicular bisector of each other.
   (i) Rectangle (ii) Parallelogram (iii) Rhombus (iv) Kite
4. Find the equation for: One fifth of a number (x) increased by 10 gives 20
   (i) $\frac{1}{5}x = 10 + 20$ (ii) $5x + 10 = 20$ (iii) $\frac{1}{5}x + 10 = 20$ (iv) $5x = 10 + 20$
5. Without adding, find the sum: $1 + 3 + 5 + 7 + 9 + 11 + 13 + 15$
   (i) $7^2 = 49$ (ii) $8^2 = 16$ (iii)$8^2 = 64$ (iv) $9^2 = 81$
6. What will be the unit digit of cube of 123?
   (i) 6 (ii) 9 (iii) 3 (iv) 7
7. Simplify $10^3 - 9^2$
   (i) 12 (ii) 19 (iii) 919 (iv) -919
8. An item marked at Rs 840 is sold for Rs 714. Find discount %.
   (i) $\frac{1}{15}$% (ii) 10% (iii) 15% (iv) 85%
9. What is the measure of each angle of a regular pentagon?
   (i) 108° (ii) 90° (iii) 60° (iv) 100
10. Express 2.5 in the form of percentage.
    (i) 25% (ii) 250% (iii) 2.5% (iv) 0.25%
11. The number of boys and girls in a class are in the ration 7 : 5. If the number of boys is 8 more than the number of girls, find the total class strength.
12. Two adjacent angles of a parallelogram are in ratio 3 : 2. Find all the angles of the parallelogram..
13. Find the smallest square number which is divisible by each of the numbers 8, 15 and 20.

Case Study

14. A shopkeeper buys 300 bicycles at Rs 1500 per bicycle. He spends Rs 75 per bicycle on transportation and he also spends Rs 7500 on advertising. Then he sells all the bicycles at Rs 1700 per bicycle. Find
    (a) C.P. of 300 bicycles
    (i) ₹ 4,50,000 (ii) ₹ 22,500 (iii) ₹ 4,80,000
    (b)S.P. of 300 bicycles
    (i) ₹ 5,10,000 (ii) ₹ 5,00,000 (iii) ₹ 5,20,000
    (c) profit or loss%
    (i) loss $6\frac{1}{4}$% (ii) profit $6\frac{1}{4}$% (iii) neither profit nor loss