RAMAGYA SCHOOL, NOIDA

VI/ MATHEMATICS/2017-18

OLYMPIAD PRACTICE WORKSHEET

(Concept)

1. The ratio to be meaningful the terms should have
   a. same units b. same value c. same factors d. different units

2. The ratio of 15 minutes to 1 hour is:
   a. 15:1 b. 1:2 c. 1:4d. 4:1

3. If 1,2,3 and x are in proportion, then the value of x is:
   a. 3 b. 4 c. 5 d. 6

4. The ratio of five dozen balls to 16 balls
   a. 15:4 b. 5:16 c. 16:5 d. 1:3

(Application)

5. Gaurav earns Rs 1,200 in 10 days. In 18 days he will earn:
   a. Rs 2,160 b. Rs 2,000 c. Rs 1,960 d. Rs 2,250

6. The ratio of girls to that of boys in a class is 5:4. If there are 25 girls in the class, then the number of boys is:
   a. 15 b. 20 c. 25 d. 30

7. The ratio of five dozen balls to 16 balls is:
   a. 15:4 b. 5:16 c. 16:5 d. 1:3

8. The cost of flooring at Rs 20 per square metre is Rs 4200. If the length of the reem is 21m, then its breadth is:
   a. 5m b. 10m c. 15m d. 20 m

9. While estimating the area of a closed figure, the contribution of 5 squares (1cmX1cm) which are more than half filled is:
   a. O cm^2 b. 4 cm^2 c. $8cm^2$ d. $16cm^2$

10. If q is the mean proportion of p and r then the value of q is:
    a. Pr b. $(pr)^2$ c. $\sqrt{pr}$ d. $\frac{pr}{2}$

11. The third proportional to 2 and 8 is:
    a. 1 b. 4 c. 16 d. 32

12. Krish travels 8 km in an hour. Arushi travels 12 km in half an hour. The ratio of the speed of Krish to the speed of Arushi is:
    a. 2:3 b. 3:2 c. 1:2 d. 1:3

13. Find x if 15:60::x:20
    a. 4 b. 5 c. 6 d. 8

14. The distance travelled by Roy and Akthar in an hour is 8 km and 6 km. Find the ratio of speed of Roy to the speed of Akhtar.
    a. 3:4 b. 4:3 c. 6:5 d. 1:2

15. Cost of 3 dozen oranges is Rs 90. How many oranges can be purchased for Rs 17.50?
    a. 7 b. 5 c. 6 d. 4

(HOTS)

16. Cost of 10 kg of rice is Rs 325. What will be the cost of 8 kg of rice?
    a. Rs 300 b. Rs 260 c. Rs100 d. Rs 360

17. The area of a rectangular field 50 m long is 250 sq m. Find the width of the field.
    a. 4 m b. 5 m c. 6 m d. 8 m

18. If $\frac{p}{q} = (\frac{2}{3})^3 \div (\frac{3}{2})^{-3}$ then the value of $(\frac{p}{q})^{-10}$=
    a. 1 b. 0 c. cannot be determined d. none

19. In a triangle ABC, E is the mid point of AC and G is the centroid of the triangle then BE:GE
    a. 1:2 b. 2:1 c.3:1 d. 1:3

20. The bisector of an angle of a triangle bisects the opposite sides in the ratio of
    a. Opposite sides b. 2:1 c. 3:1 d. none of these