FIRST TERM EXAMINATION—2017-18

CLASS–VIII

SUBJECT–MATHEMATICS

Time : 3 Hours   M.M. : 80

Please Check the Total Marks

Do not write any answers on the question paper.

General Instructions :

(1) All questions are compulsory.

(2) Question paper is divided into 4 sections.

   Section A consists of 6 questions of 1 mark each.

   Section B consists of 6 questions of 2 marks each.

   Section C consists of 10 questions of 3 marks each.

   Section D consists of 8 questions of 4 marks each.

(3) Draw the figures for the questions wherever required.

Section-A

1. Multiply $-\dfrac{8}{9}$ by the reciprocal of $\dfrac{-4}{7}$.

2. What is the x-coordinate and y-coordinate of the point $(5, 7)$?

3. Why 400 is not a perfect cube ? Give reason.

4. If the three digit number $99x$ is divisible by 3, what is the value of x ?

5. What is the sum of all interior angles of a regular polygon of 8 sides ?

6. What are the co-ordinates of a point lying on the x-axis ?

Section-B

7. Subtract the additive inverse of $\frac{-2}{5}$ from the multiplicative inverse of $\frac{-7}{9}$.

8. After 12 years, I shall be three times as old as I was 4 years ago. Find my present age.

9. Find a Pythagorean triplet whose one member is 15.

10. Find the smallest number by which 1188 must be divided to obtain a perfect cube.

11. Find the measure of each exterior angle of a regular polygon of 15 sides.

12. Construct a square of side 5 cm.

Section-C

13. Simplify the followong by using appropriate properties :

$$\frac{5}{9} \times \left(\frac{-2}{7}\right) - \frac{4}{3} \times \frac{21}{10} + \left(\frac{-3}{7}\right) \times \frac{5}{9}$$

14. Sheeba's mother's present age is six times Sheeba's present age. Sheeba's age five years from now will be one third of her mother's present age. What are their present ages ?

15. Solve the following linear equation :

$$\frac{3x-2}{10} - \frac{x+3}{7} + \frac{4x-7}{3} = x - 1$$

16. Find the greatest 4 digit number which is a perfect square.

17. Find the cube root of 857375 by estimation method.

18. The interior angle of a regular polygon exceeds its exterior angle by 108°. How many sides does the polygon have ?

19. Construct a quadrilateral ABCD in which AB = 5 cm, BC = 6.5 cm, CD = 7 cm, $\angle B = 120°$ and $\angle C = 90°$.

20. If the angles of a pentagon are in the ratio 13 : 8 : 11 : 7 : 15, find the difference between the largest and the smallest angle.

21. Construct a parallelogram HEAR in which HE = 5 cm, EA = 6 cm and $\angle R = 85°$.

22. Rahul makes a cuboid of plasticine of sides 5 cm, 7 cm and 7 cm. How many such cuboids will he need to form a cube ?

Section-D

23. Find the cube root of 110592 by prime factorisation method. Also find the value of

$$\sqrt[3]{110.592} + \sqrt[3]{0.110592} + \sqrt[3]{0.000110592}$$

24. I have a total of ₹ 4,00,000 in notes of denominations ₹ 100, ₹ 50 and ₹ 10 respectively. The ratio of the number of these notes is 2 : 3 : 5. How many notes of each denomination do I have ? I will purchase books worth ₹ 2500 for my younger sister. Which 2 moral values are being depicted by this behaviour?

25. Find the square root of 1369 and 3136 by long division and hence find the value of

$$\frac{\sqrt{0.3136} + \sqrt{0.1369}}{\sqrt{0.3136} - \sqrt{0.1369}}$$

26. The perimeter of a parallelogram is 140 cm. If one of the sides is longer than the other by 10 cm, find the length of each of its sides. Also if one of the an is 80°, find the measure of all the angles.

27. Construct a quadrilateral DEAR in which DE = 4 cm, EA = 5 cm, AR $\angle E = 60°$ and $\angle A = 90°$.

28. Replace the letters A, B, C, D, E, X, Y and Z by numbers in the following questions :

(a)
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   A6B4C
+  17255
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   9D0E8
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(b)
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   32X
-  1Y9
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   Z82
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29. The following table gives the temperature in °C and its corresponding value in °F :

Temperature in °C	0	5	10	15	20	30
Temperature in °F	32	41	50	59	68	86

Draw a graph by taking temperature in °C on x-axis and in °F on y-axis.

Use this graph to answer the following questions :

(i) What is the temperature in °F corresponding to 25°C ?

(ii) What is the temperature in °C corresponding to 95°F ?

30. Find any six rational numbers between $\dfrac{-5}{6}$ and $\dfrac{5}{8}$.

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