

St. Mary's School, Dwarka
Periodic Test 2
Class – VII
Subject – Mathematics

Rakshit
7-10-20

Reading Time : 15 minutes

Writing Time: 2 ½ hrs.

No. of questions: 30

Max Marks: 60

General Instructions:

- (i) The question paper contains five sections A, B, C, D and E.
- (ii) Section A consists of 8 multiple choice questions of 1 mark each.
- (iii) Section B consists of 6 questions of 1 mark each.
- (iv) Section C consists of 6 questions of 2 marks each and 6 questions of 3 marks each.
- (v) Section D consists of 2 questions of 4 marks each.
- (vi) Section E consists of 2 case study-based questions of 4 marks each.

Section A

Q(1-8) Choose the correct option: (1 x 8 = 8)

Q1: Which is the longest side in $\triangle PQR$ right angled at P? (1)

- (a) PQ (b) QR (c) PR (d) QP

Q2: If two acute angles of a right-angled triangle are equal, then what is the measure of each acute angle? (1)

- (a) 30° (b) 45° (c) 60° (d) 90°

Q3: In the following figure, if $\angle 1 + \angle 3 = 120^\circ$, then what is the measure of $\angle 2 + \angle 4$? (1)

- (a) 60° (b) 120° (c) 240° (d) 80°

Q4: If the LHS and RHS of an equation are interchanged, then what change will occur in the equation? (1)

- (a) The value of the variable becomes double. (b) The value of the variable becomes half.
(c) The value of the variable becomes zero. (d) The equation remains the same.

Q5: What should be added to the double of $\frac{2}{5}$ to get 1? (1)

- (a) $\frac{1}{2}$ (b) $\frac{1}{3}$ (c) $\frac{1}{4}$ (d) $\frac{1}{5}$

Q6: Which of the following statement is true? (1)

- (a) $7 \div 0 = 7$ (b) $7 \div 0 = 0$ (c) $7 \div 0 = 0 \div 7$
(d) $0 \div 7 = 0$

Q7: Which of the following shows the maximum rise in temperature? (1)

- (a) 23°C to 32°C (b) -10°C to 1°C (c) -18°C to -11°C
(d) -5°C to 5°C

Q8: The order of rotational symmetry of an equilateral triangle is (1)

- (a) 1 (b) 2 (c) 3 (d) 4

Section - B

Q9: The scores got by 5 students are as follows:

38, 13, -32, 8 and -16

Find the mean score for the above data.

(1)

Q10: An angle is greater than 90° . Is its supplementary angle greater than 90° or equal to 90° or less than 90° ?

(1)

Q11: Check whether $p = -4$ is the solution of the equation $4p - 3 = 13$ or not.

(1)

Q12: Evaluate $(-93) \div [(-30) + (-1)]$

(1)

Q13: Check whether a triangle with lengths of sides 10 cm, 6 cm and 4 cm is possible or not. Justify your answer.

(1)

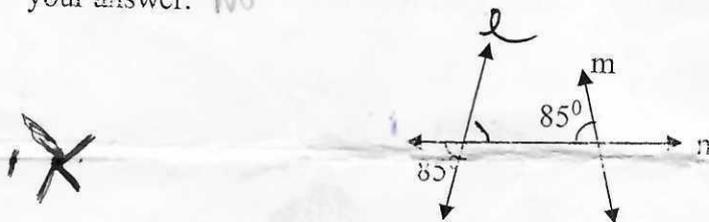
Q14: Which is greater? $\frac{7}{4}$ $\frac{8}{3}$

(1)

Section - C

Q15: In the given figure, check whether the line l is parallel to m or not. Give reasons for your answer. *No*

(2)



Q16: Draw rough sketches for the following:

(a) In ΔXYZ , XY and XZ are the altitudes of the triangle.

(b) In ΔPQR , PM is an altitude in the exterior of the triangle.

(2)

Q17: Length of a rectangle is 7.1 cm and its breadth is 2.5 cm. What is the area of the rectangle?

(2)

Q18: The following are the marks of 20 students in a class assessment. Arrange the data in a tabular form using tally marks:

4, 6, 7, 5, 3, 5, 4, 5, 2, 6, 2, 5, 1, 9, 6, 5, 8, 4, 6, 7

(2)

Q19: Write the equations for the following statements:

(a) Three-fourth of y is 16.

(2)

(b) Six times n subtracted from 19 is 12.

Q20: Find the product of the following:

(a) $(-3) \times (-6) \times (-2) \times 5$

(b) $(-16) \times 0 \times (-17)$

(2)

Q21: AM is a median of a triangle ABC . Is $AB + BC + CA > 2 AM$? Also draw the figure. (3)

Q22: Solve the following equations: (3)

(a) $6y + 10 = -2$

(b) $3(n-5) = -21$

Q23: State the number of lines of symmetry for the following geometrical shapes and show them by drawing the neat figures: (3)

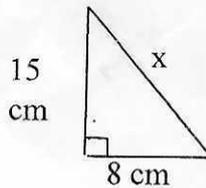
(a) Rectangle

(b) An isosceles triangle

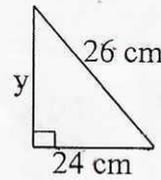
(c) Scalene triangle

Q24: Find the value of x and y in the following figures: (3)

(a)

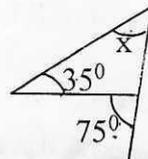


(b)

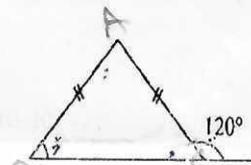


Q25: In a test, (+4) marks are given for every correct answer and (-2) marks for every wrong answer. Rohit answered all the questions and scored 68 marks. If he has got 25 correct answers, how many questions has he attempted incorrectly? (3)

Q26: (a)



(b)



Using the properties of triangles, find the value of x in the above figures. (3)

Section-D

Q27: Set up equations for the following statements and solve them: (4)

(a) When 11 is subtracted from thrice a number, the result is 16. Find the number.

(b) In an isosceles triangle, the base angles are equal. The vertex angle is 40° . What are the base angles of the triangle?

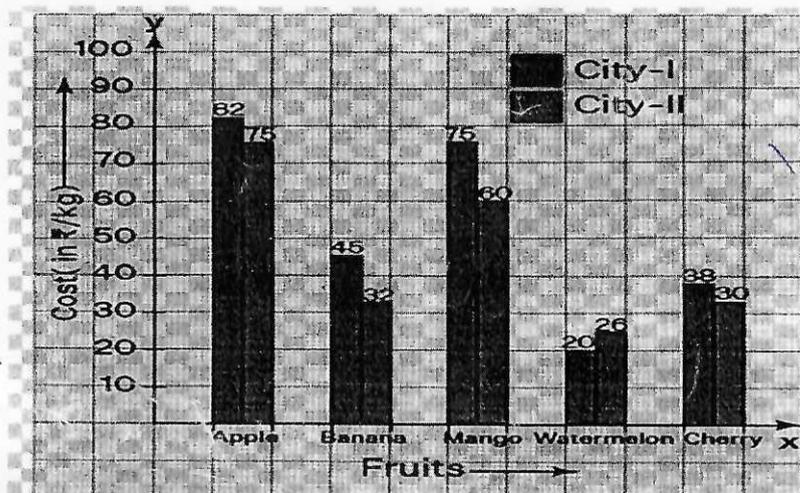
Q28:(a) A sugar bag contains 30 kg of sugar. After consuming $\frac{5}{6}$ of it, how much sugar is left in the bag? (2)

(b) Each side of a regular polygon is 2.5 cm in length. The perimeter of the polygon is 12.5 cm. How many sides does the polygon have? Also name the polygon. (2)

Section-E

Case study-based questions:

Q29:



Study the given double bar graph and answer the questions given below:

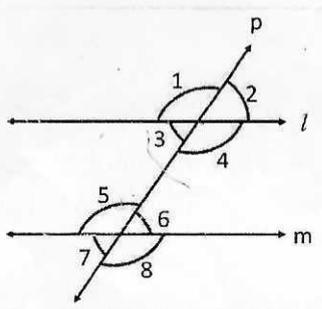
(1 x 4 = 4)

- What information does the above double bar graph depict?
- Name the fruits for which the cost of 1 Kg is greater in City I as compared to City II.
- If a person buys 6 Kg apples from City II and another person buys 9 Kg Cherry from City I then who pays more money and by how much?
- Find the ratio of the cost of 8 Kg mangoes in City II to the cost of 8 Kg Bananas in City I.

Q30:

The teacher explains the concept 'Angles made by a transversal' in the class. At the end, to check the concept clarity of the students, the teacher draws a figure on the board in which $l \parallel m$ and p is the transversal line. To find the values of unknown angles made by the transversal, the teacher tells them the value of $\angle 1 = 75^\circ$. Based on the given information and figure below, answer the following questions:

(1 x 4 = 4)



- Write any two pairs of vertically opposite angles in the figure.
- What is the sum of $\angle 3$ and $\angle 5$?
- What is the value of $\angle 7$?
- What is the sum of all exterior angles in the figure?