

MAR THOMA RESIDENTIAL SCHOOL, TIRUVALLA
SECOND TERMINAL EXAMINATION 2019 -'20

CLASS : VI

MATHEMATICS

MARKS: 80

TIME : 2hrs

Answer all questions:-

Question 1

(1) The perimeter of a triangle is 67cm. Two of its sides measure 18cm and 26cm respectively. Find the length of the third side of the triangle. (3)

(2) Simplify :- $2\frac{3}{5} + 1\frac{7}{10} - 3\frac{2}{15}$ (3)

(3) If Ram's present age is x years, express the following in algebraic form. (4)

(i) Ram's age after 6 years

(ii) Ram's age 4 years ago.

(iii) Ram's sister is 5 years younger than him. What is his sister's age?

(iv) Ram's father is 5 years more than 3 times his age. What is his father's age?

Question 2

(1) 6 men pack 312 parcels per day. Find the number of parcels packed by 11 men *per day*.

(2) Construct a 120° angle. (3)

(3) Find the ratio of each of the following in the simplest form: (3)

(a) 3.5 kg to 250 g

(b) 15 mm to 2cm (4)

Question 3

(1) How many terms are there in each of the following algebraic expressions?

What is each expression called ?

(a) $6 + m + mn$ (b) $2xy$ (c) $x^2 - 2x$ (3)

(2) Find x if 18, 30, x and 15 are in proportion.

(3) Name the types of the following triangles (3)

(a) ΔABC with $AB = 8\text{cm}$, $AC = 7\text{cm}$, $BC = 5.5\text{cm}$ (4)

(b) ΔPQR with $PQ = RP = 5\text{cm}$ and $QR = 7.3\text{cm}$

(c) ΔDEF with $\angle D = 90^\circ$

(d) ΔLMN with $\angle L = 30^\circ$, $\angle M = 50^\circ$, $\angle N = 100^\circ$.

Question 4

- (1) Find the area of a piece of cloth 1 m 25 cm wide and 2 m long.
- (2) If the cost of a notebook is Rs. x and the cost of a pen is Rs. y , then what is the cost of 5 notebooks and 2 pens? Write the answer as an algebraic expression.

(3) Simplify (a) $\frac{3}{7} \times 5 \frac{5}{6}$

(b) $5 \frac{1}{4} \div \frac{7}{8}$

Question 5

- (1) Write the degree of each of the following polynomials.
 - (a) $y^3 + 2y^2 - 5$
 - (b) $xy + y + 6$
 - (c) $7 - abc$
- (2) Construct 30° angle.
- (3) A certain club has 100 members, out of which 25 play tennis, 28 play badminton, 12 play chess and the rest do not play any game. Find the ratio of number of members who play (i) badminton to the number of those who play chess
(ii) badminton to the number of those who do not play any game.
(iii) tennis to the number of those who do not play any game.

Question 6

- (1) John types 450 words in half an hour. How many words would he type in 7 minutes?
- (2) Seetha's house is $1 \frac{9}{10}$ km from her school. She walked some distance and then took bus for $1 \frac{1}{2}$ km to reach the school. How far did she walk?
- (3) The area of a square and a rectangle are equal. If each side of the square is 20 cm,
 - (a) Find the area of the square.
 - (b) If the breadth of the rectangle is 16 cm, find the length of the rectangle
 - (c) Find the perimeter of the rectangle

Question 7

- (1) Write the numerical coefficient of :-
 - (a) $8xy$
 - (b) $\frac{2}{7} ab$
 - (c) xyz
- (2) The ratio of boys to girls in a school is $9 : 11$. If there are 540 boys, How many girls are there?

(3) Find the greatest and smallest among these fractions $\frac{2}{3}$, $\frac{1}{3}$, $\frac{1}{6}$ and $\frac{5}{36}$

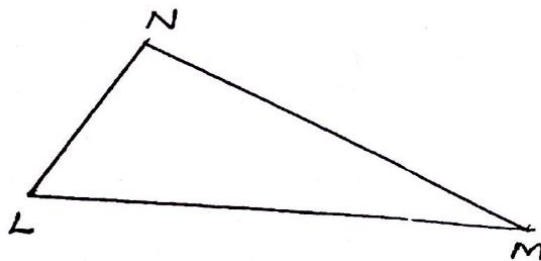
(4)

Question 8

(1) Are 20,25,12,15 in proportion?

(2) In the figure:

(3)



(a) the vertices of the triangle are _____.

(b) The angles of the triangle are _____.

(3)

(c) The sides of the triangle are _____.

(3) A frame of a picture has length 20 cm and breadth 18 cm. Find the perimeter and hence find the cost of decorating the frame with silver lining if the cost is Rs 12 per cm.

(4)
