

Note : i. All answers to be written in the answer booklet provided. Show working wherever required.

ii. Do not copy the questions

iii. Rough work must be done on the same page as the rest of the answer.

Q.I).A. Choose the correct option for the following questions given below: (10m)

1. What distance will be covered by a bus moving at 55km h^{-1} in 3 hours

- (a) 145km (b) 24km (c) 165 km (d) 55km

2. A triangle with all its sides equal is called _____.

- (a) an acute triangle (b) an right angled triangle (c) an equilateral triangle
(d) an isosceles triangle

3. The product of $4a$ and $-5b$ is

- (a) $20b$ (b) $30ab$ (c) $-4ab$ (d) $-20ab$

4. There are 30 boys and 20 girls in a class. The ratio of the number of girls to the number of boys is _____

- (a) 2: 3 (b) 3: 2 (c) 2: 5 (d) 3: 5

5. The sum of $8xy$ and $-3yx$ is _____

- (a) $11yx$ (b) $8xy - 3yx$ (c) $5xy$ (d) $8xy$

6. The median of 7,6,4,2,11 is _____.

- (a) 7 (b) 6 (c) 4 (d) 11

7. Which of the following can be a unit of Area _____

- (a) cm (b) cm^2 (c) cm^3 (d) m

8. A perpendicular drawn from the vertex to the opposite side of a triangle is known as _____.

- (a) a median (b) an altitude (c) an angle bisector (d) a bisector

9. The ratio equivalent to 21:7

- (a) 14:2 (b) 1:3 (c) 42:6 (d) 3:1

10. $-\frac{38b}{2} =$ _____

- (a) $-19b$ (b) $19b$ (c) $56b$ (d) $-56b$

Q.II.

(20m)

1. Find the median of 48 , 41 , 45 , 47 , 43, 51 , 50 , 49 , 53 , 52.

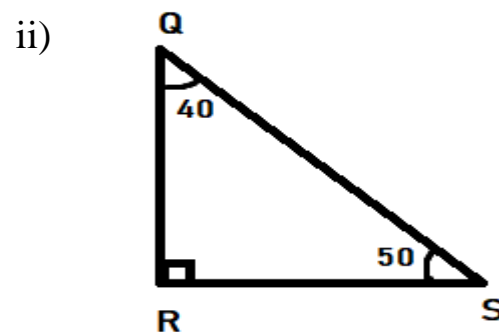
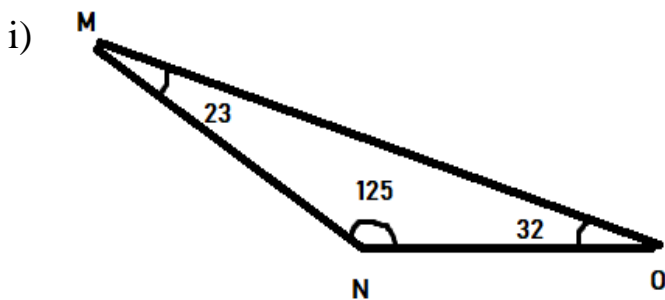
2. Add : $-2x^2 + 4x$ and $5x^2 - 3x$

3. Express each ratio in its simplest form:

i) 12 months and 3 years

ii) 6kg and 360g

4. Classify the following triangles according to measures of their angles.



5. Find the length of the rectangle ,if Area = 150 cm^2 and breadth = 5cm.

6. Simplify $(3ab^2 + 3a^2b) + (6ab^2 - 3a + 2b - 4a^2b)$

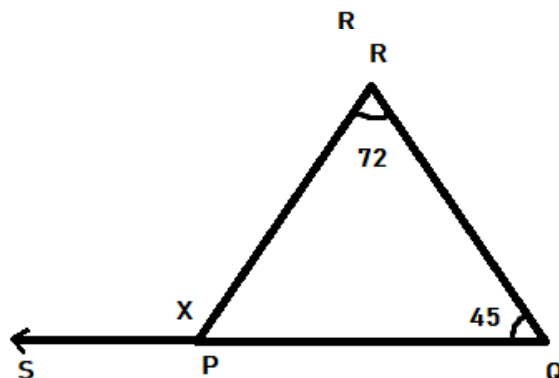
7. Bridge 'A' is 5 km long and bridge 'B' is 300m long. Find the ratio of the length of bridge 'A' to the length of bridge 'B'

8. The runs scored in a cricket match by 11 players is as follows:

7,16,121,51,101,81,10, 16 , 9 ,12,16 . Find the mean.

9. Divide : $6a^2 - 9b^3$ by $3ab$

10. In ΔPQR ,if $\angle RQP = 45^\circ$ and $\angle PRQ = 72^\circ$. Find x



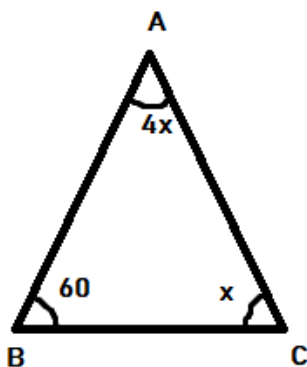
Q.III).

1. In $\triangle ABC$, $\angle A = 80^\circ$, $\angle B = \angle C$. Find $\angle C$. (3m)
2. A square field has each side 90 m, whereas a rectangular field has length 125 m and breadth 70 m which of these two field has greater perimeter and by how much. (3m)
3. Aman and Mohit start from the same place and at the same time with speed 9 km per hour and 51 km per hour respectively find the distance between Aman and Mohit after 4 hour if both move in (4m)
 - i). same direction
 - ii). opposite direction

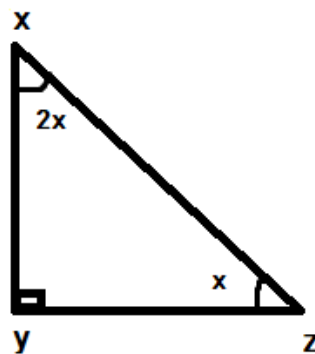
Q.IV).

1. A man earns ₹3,840 per month. He spends ₹640 on food, ₹1600 on household expenses and save the rest. Find the ratio of : (3m)
 - i) Expenditure for food to expenditure for household expenses
 - ii) Total expenditure to total income
2. Subtract $(7a - 10b)$ from the sum of $(3a + 4b)$ and $(6a - 9b)$ (3m)
3. For each triangle given below, Find the value of x : (4m)

i)



ii)



Q.V).

1. Find the product of : $5x + 3y - 7z$ and $x + 3y$ (3m)
2. Find the perimeter of a rectangular park that is 63m long and 27 m wide . Find the cost of fencing the park with steel wire if the rate of fencing is ₹5 per metre . (3m)
3. The ratio of the sides of a triangle is 2 : 4 : 7. If the perimeter of the triangle is 66.3cm. What is the length of the longest side? (3m)

Q.VI).

- 1.The distance between school and home is 540 km. If Sheetal takes 3 hours to cover this distance . Find the speed of Sheetal in km/hr and m/s. (3m)
2. Find the product of : $(7x - 7)(5x + 3)$ (3m)
- 3.A rectangular hall has a length of 15m and a width of 12m . If the hall is to be tiled using $50 \text{ cm} \times 30 \text{ cm}$ tiles , then
 - i). How many tiles will be needed ?
 - ii). What will be the total cost at the rate of ₹25 per tile? (4m)

Q.VII).

- 1.A train covers first 120 km in 2 hours , next 180 km in 4 hours and last 150 km in 3 hours. Find the average speed of the train. (3m)
- 2.Divide : $36x^3y^3 - 81x^4y^5 + 63x^5y^4$ by $9x^2y^3$ (3m)
- 3.Find the value of x , if the mean of:
5, 13 , 10 ,13 , 15 , x , 17 and 14 is 12 (4m)