Mathematics

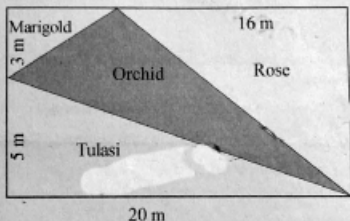**Class : 7**   **Time : 2 hours**

Instructions

1. 15 minutes cool off time is to be allotted for reading and understanding the activities.

2. Answer any **SIX** activities from the given **EIGHT** activities .

Activity 1 Garden

A rectangular garden has length 20 m and breadth 8 m. Different types of plants were planted in the garden as shown in the figure.

A) Which among the following is the total area of the garden ?

   (a) 16×3 (b) 16×5 (c) 20×8 (d) 16×8

B) What is the area of the land where marigold is planted ?

C) How much more area is rose planted than tulasi?

D) What is the area of the land in which orchid is planted ?

Activity 2 Square

$$1 = 1^2$$
$$1 + 3 = 2^2$$
$$1 + 3 + 5 = 3^2$$
$$1 + 3 + 5 + 7 = 4^2$$

....
....

A) Write the tenth row of this pattern

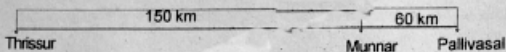B) The sum of certain consecutive odd numbers starting from 9 is 3120. What is the perfect square succeding 3120?

    (a)   3145   (b) 3136   (c) 3138   (d) 3142

C) How many consecutive odd numbers starting from 1 should be added to get the above perfect square ?

D) Find the square of 57 without multiplication. Explain the method used

Activity 3 Picnic

Raju and his friends went for a picnic from Thrissur to Munnar Distance between the places are given below.

The speed of the journey from Thrissur to Munnar is 50 km/h. They took 2 hours to travel from Munnar to Pallivasal

A) How much time is taken to travel from Thrissur to Munnar?

B) What is the average speed of the journey from Munnar to Pallivasal?

C) What is the average speed of the whole journey?

Activity 4 Project

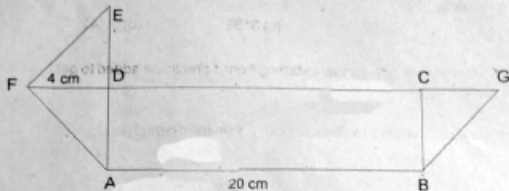Zeenath is doing a project to find out the measures which can be used to draw a triangle.

A) Which among the following measures can be used to draw a triangle?

    (a)   8 cm, 4 cm, 3 cm

    (b)   9 cm, 5 cm, 12 cm

    (c)   5 cm, 5 cm, 10 cm

    (d)   6 cm, 7 cm, 15 cm

B) What is the relation between the length of sides which can be used to draw a triangle?

C) Draw △ABC with each side 7 cm.

D) Write the measures of all angles in the above triangle.

Activity 5 Area

In the figure, area of the rectangle ABCD is 80 sq.cm., AD=DE

A) What is the length of AD?

(a) 5 cm   (b) 10 cm   (c) 4 cm   (d) 8 cm

B) What is the area of △AEF ?

C) If the area of △BCG is 6 sq.cm., what is the length of CG in centimetres ?

D) What is the total area of the figure?

Activity 6 Train Journey

A 250 metre long train travels at a speed of 90 km/h.

A) How far will it go in one second ?

B) How much time would it take to pass a signal light in the railway station?

C) What is the time taken by the train to cross a 225 metre long platform?

Activity 7 Draw and Measure

A) Draw △PQR with   PQ = 6.5 cm, ∠ P=50°, ∠ Q=80°

B) What is the measure of ∠R?

C) What is the length of QR?

Activity 8 Ratio and Division

Raju has an amount of 120 rupees and Mary has 180 rupees.

A) What is the ratio of the amounts Mary and Raju have ?

(a) 3 : 2   (b) 2 : 3   (c) 6 : 5   (d) 5 : 9

B) Mother gave 60 rupees more to Mary. How much more money Raju needed to make the same ratio ?

C) If they divide 800 rupees in the same ratio, how much amount did each get ?