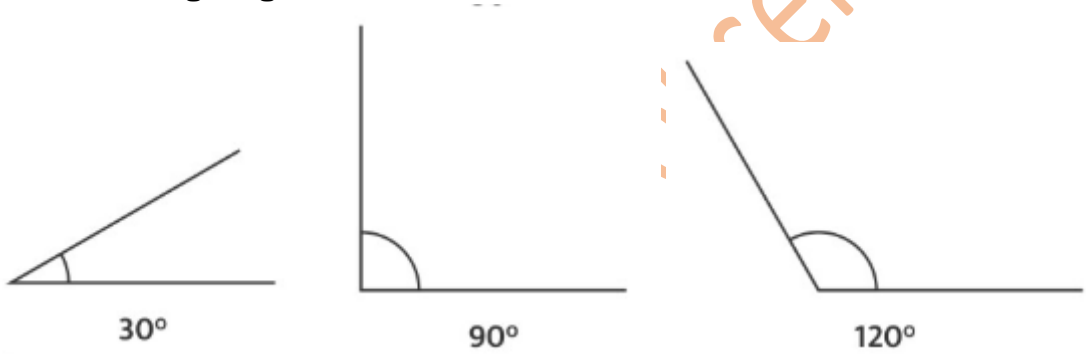
First Term Evaluation 2024–25

Standard: VI – Mathematics (English Medium)
Time: 2 hours
Cool-off time: 15 minutes
Instructions:

- Read all questions carefully.
- Attempt any 6 activities out of 8.
- Each activity carries 5 marks.
- Total marks: 30

Activity 1: Angles Around Us

Look at the figure given below:



a) Name the smallest angle in the figure.
b) Which angle is a right angle?
c) Draw a 75° angle using a protractor.
d) Is 120° greater than a straight angle? Justify your answer.

Activity 2: Average in Daily Life

The daily water usage (in litres) of 5 families in a colony is given:
Family A – 180 L, B – 150 L, C – 200 L, D – 170 L, E – 160 L

a) Find the average water usage per family.
b) One family left and the new average became 165 L. Which family left the colony?
c) If a new family uses 195 L per day, what will be the new average?

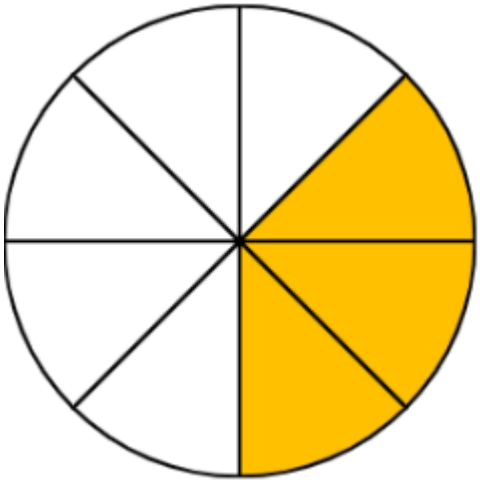
Activity 3: Sharing Sugar

5 kg of sugar is equally packed into packets.

a) How much sugar is in one packet?
b) Renu bought 3 such packets. How much sugar did she buy?
c) She gave half of it to her friend. How much sugar did she give?
d) Write a fraction equivalent to ½ with denominator 16.

Activity 4: Fractions in a Circle

Look at the circle divided into 8 equal parts with 3 parts shaded.



a) What fraction of the circle is shaded?
b) What angle does the shaded part make?
c) Draw a circle of radius 3 cm and shade 5/8 of it.
d) Which of the following shows the time when the angle between hands is 180°?
A) 12 O'clock B) 3 O'clock C) 6 O'clock D) 9 O'clock

Activity 5: Volume of Blocks

A rectangular box has dimensions: Length = 6 cm, Width = 4 cm, Height = 5 cm.

a) Find the volume of the box.
b) If a cube of side 2 cm is placed inside, how many such cubes can fit?
c) A tank with volume 2400 cm^3 is filled with water. If 1 litre = 1000 cm^3, how many litres is this?
d) If the water level rises by 4 cm, what is the new volume?

Activity 6: Fraction Addition in Real Life

A jug contains ¾ litre of milk. Another 2/5 litre is added.

a) What is the total amount of milk in the jug?
b) Subtract 2/5 from ¾ and simplify your answer.

c) Which is larger: ¾ or 2/5?
d) Write the sum of ½ and ⅓ as a single fraction in lowest terms.

Activity 7:

A tank is 2 metres long and 1 metre wide. It is to be filled with 10000 litres of water.

a) What is the required height of the tank in metres?
b) Find the volume of the tank in cubic metres.
c) Convert the volume into litres.
d) If the tank is only half filled, how many litres of water does it contain?

Activity 8: Capacity Comparison

Two rectangular tanks have the following dimensions:

Tank A: 50 cm × 40 cm × 30 cm
Tank B: 60 cm × 30 cm × 25 cm

a) Find the capacity of each tank in litres.
b) Which tank has more capacity?
c) If tank A is half filled and tank B is ¾ filled, which contains more water?
d) A block of 10 cm^3 is immersed in tank A. What volume of water is displaced?