Instructions:

1. Read the questions carefully before answering.
2. Attempt any **six** activities from the given **eight** activities.
3. All activities carry equal marks.

Activity 1

A line intersects two parallel lines, creating several angles. If one of the angles is 120°, calculate all other angles formed. Explain the relationship between corresponding angles, alternate angles, and co-interior angles in this situation.

Activity 2

Two friends share a pizza that is cut into 12 equal slices. One friend eats 1/3 of the pizza, and the other eats 5/12. How many slices are left? Express the remaining portion as a fraction and simplify your answer.

Activity 3

A rectangular floor of length 15 meters and width 10 meters needs to be covered with square tiles. If each tile is 1 meter by 1 meter, how many tiles are required to cover the floor? Also, calculate the total cost if each tile costs ₹20.

Activity 4

Solve the following word problem: A school bought 12.5 kg of rice for a meal program. If each student receives 1/5 kg of rice, how many students can be served? Show your work step-by-step.

Activity 5

Construct a parallelogram where one angle is 70° and the adjacent angle is 110°. Measure and label all sides and angles. Explain why opposite angles in a parallelogram are equal.

Activity 6

A water tank can hold 500 liters of water. If 2/5 of the tank is filled, how many liters of water are in the tank? If the tank is filled further by 150 liters, what fraction of the tank is now full?

Activity 7

If a rope is 30 meters long and is divided into 6 equal parts, what is the length of each part? If 3 parts are used, how much rope is left? Express the remaining rope as both a fraction and in meters.

Activity 8

Construct a quadrilateral where two opposite sides are parallel and the non-parallel sides are equal in length. Measure and label all sides and angles.