

# ANSWERS

## AREA OF QUADRILATERALS

**Instructions:** Calculate the area of the quadrilaterals in different everyday situations.

### Exercise 1: The Wheelbarrow

The construction worker carries material in a wheelbarrow shaped like a trapezoid with a major base of 100 cm, a minor base of 75 cm, and a height of 70 cm.

**Question:** What is the area of the wheelbarrow?

**Solution:**

$$\begin{aligned} \text{Area} &= (100 \text{ cm} + 75 \text{ cm}) * 70 \text{ cm} / 2 \\ &= 175 \text{ cm} * 70 \text{ cm} / 2 \\ &= 12250 \text{ cm}^2 / 2 \\ &= 6125 \text{ cm}^2 \end{aligned}$$



### Exercise 2: The Rug

In the living room, there is a velvet rug in the shape of a rhomboid with a base of 150 cm and a height of 130 cm.

**Question:** What is the area of the rug?

**Solution:**

$$\text{Area} = 150 \text{ cm} * 130 \text{ cm} = 19500 \text{ cm}^2$$



### Exercise 3: The Envelope

Due to not paying attention in class, Sarita made her craft envelope with incorrect measurements, resulting in an asymmetric trapezoid with two angles, one with a base of 10 cm and a height of 9 cm, and the other angle with a base of 10 cm and a height of 8 cm.

**Question:** What is the area of the envelope?

**Solution:**

$$A1 = \frac{1}{2} * 10 \text{ cm} * 9 \text{ cm} = 45 \text{ cm}^2$$

$$A2 = \frac{1}{2} * 10 \text{ cm} * 8 \text{ cm} = 40 \text{ cm}^2$$

$$\text{Area} = 45 \text{ cm}^2 + 40 \text{ cm}^2$$

$$\text{Area} = 85 \text{ cm}^2$$



How Did You Do?

