

ANSWERS

AREA OF TRAPEZOIDS

Instructions: Calculate the area of the Trapezoids in different everyday situations.

Exercise 1: The Cardboard Box

The hamburgers ordered for delivery come in a cardboard box with a base in the shape of a trapezoid, with a larger base of 16 cm, a smaller base of 12 cm, and a height of 15 cm.

Question: What is the area of the base of the cardboard box?

Solution:

$$\begin{aligned} \text{Area} &= (16 \text{ cm} + 12 \text{ cm}) * 15 \text{ cm} / 2 \\ &= 28 \text{ cm} * 15 \text{ cm} / 2 \\ &= 420 \text{ cm}^2 / 2 \\ &= 210 \text{ cm}^2 \end{aligned}$$



Exercise 2: The Lamp

Margot wants an orange fabric lamp in the shape of a trapezoid for her room. The front side has a larger base of 44 cm, a smaller base of 39 cm, and a height of 43 cm.

Question: What is the area of the front part of the lamp?

Solution:

$$\begin{aligned} \text{Area} &= (44 \text{ cm} + 39 \text{ cm}) * 43 \text{ cm} / 2 \\ &= 83 \text{ cm} * 43 \text{ cm} / 2 \\ &= 3569 \text{ cm}^2 / 2 \\ &= 1784,5 \text{ cm}^2 \end{aligned}$$



Exercise 3: Popcorn Packaging

The packaging of the popcorn we bought at the cinema has a base in the shape of a trapezoid. The larger base is 45 cm, the smaller base is 33 cm, and the height is 38 cm.

Question: What is the area of the base of the popcorn packaging?

Solution:

$$\begin{aligned} \text{Area} &= (45 \text{ cm} + 33 \text{ cm}) * 38 \text{ cm} / 2 \\ &= 78 \text{ cm} * 38 \text{ cm} / 2 \\ &= 2964 \text{ cm}^2 / 2 \\ &= 1482 \text{ cm}^2 \end{aligned}$$



How Did You Do? 😊 😐 😞