

Math with Melissa

Area of a Triangle

Diagram Labelling

1. Label the following parts on the triangle diagram below:
 - Base
 - Height
 - Vertex
 - Side

[Image: A triangle with its height drawn from a vertex to the base, but no labels.]

2. On the triangle below, mark and label the right angle, base, and height.

[Image: A right-angled triangle with the right angle, base, and height unlabelled.]

Matching Questions

Match each term to its correct definition. Write the letter of the definition next to the number of the term.

Terms:

1. Base
2. Height
3. Area
4. Vertex

Definitions: A. The point where two sides of a triangle meet B. The length of the side of the triangle chosen as the reference for measurement C. The perpendicular distance from the base to the opposite vertex D. The amount of surface enclosed within the triangle

Problem Solving or Exercises

1. Calculate the area of a triangle with a base of 10 cm and a height of 6 cm.
2. A triangle has a base of 8 m and a height of 5 m. What is its area?
3. The area of a triangle is 24 cm^2 and its base is 6 cm. Find its height.
4. A triangle has a height of 7 m and an area of 21 m^2 . What is the length of its base?
5. A triangle's base is 12 cm and its height is 9 cm. Calculate the area.
6. The area of a triangle is 30 m^2 and the height is 5 m. Find the base length.

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Answer Key

Diagram Labelling

1. The base is the bottom side of the triangle, the height is the perpendicular line from the opposite vertex to the base, the vertex is the corner opposite the base, and the side is any edge of the triangle.
2. The right angle is marked at the vertex with the square symbol, the base is the horizontal side, and the height is the vertical line from the right angle vertex to the hypotenuse.

Matching Questions

1. Base - B
2. Height - C
3. Area - D
4. Vertex - A

Problem Solving or Exercises

1. $\text{Area} = 0.5 \times 10 \times 6 = 30 \text{ cm}^2$
2. $\text{Area} = 0.5 \times 8 \times 5 = 20 \text{ m}^2$
3. $\text{Height} = (2 \times 24) / 6 = 8 \text{ cm}$
4. $\text{Base} = (2 \times 21) / 7 = 6 \text{ m}$
5. $\text{Area} = 0.5 \times 12 \times 9 = 54 \text{ cm}^2$
6. $\text{Base} = (2 \times 30) / 5 = 12 \text{ m}$