

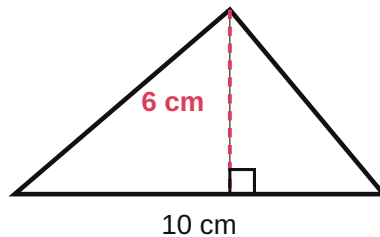
Boost Free Lessons - Year 6 Maths

Lesson 15: Area of Triangles

Name: _____ Grade: _____ Date: _____

Worked Example 1

Find the area of the triangle below.



1. A triangle is exactly **half** of a rectangle with the same base and height.
2. So the area is $\frac{1}{2} \times \text{base} \times \text{height}$.
3. Substitute: $\frac{1}{2} \times 10 \times 6$.
4. $10 \times 6 = 60$, and half of 60 is 30.

Area = 30 cm²

Worked Example 2

A triangle has an area of 24 cm² and a base of 8 cm. Find its height.

1. Start from the formula: $A = \frac{1}{2} \times b \times h$.
2. Substitute what you know: $24 = \frac{1}{2} \times 8 \times h$.
3. $\frac{1}{2} \times 8 = 4$, so $24 = 4 \times h$.
4. Divide both sides by 4: $h = 6$.

The height is 6 cm

Remember: Area of a triangle = $\frac{1}{2} \times \text{base} \times \text{height}$. The **height** must be at a right angle to the base, not the slanted side.



Question 1: Find the area of each triangle.

1. base 6 cm, height 4 cm
2. base 10 cm, height 5 cm
3. base 12 m, height 7 m
4. base 8 cm, height 9 cm
5. base 20 cm, height 3 cm
6. base 15 m, height 4 m
7. base 7 cm, height 6 cm
8. base 24 cm, height 5 cm



Question 2: Answer the following.

1. Area 30 cm^2 , base 10 cm. Find the height.

2. Area 48 m^2 , height 8 m. Find the base.

3. Area 21 cm^2 , base 6 cm. Find the height.

4. A rectangle 12 cm by 8 cm is cut along a diagonal. Find the area of one triangle.

5. Why must the height be measured at a right angle to the base?

6. Find the area of a triangle with base 9 cm and height 4 cm.



Question 3: Answer the following questions.

1. A triangular sail has a base of 5 m and a height of 8 m. Find its area.
2. A triangular garden bed has base 6 m and height 4 m. Soil costs \$15 per square metre. Find the cost.
3. A triangular flag has an area of 0.6 m^2 and a base of 1.2 m. Find its height.
4. Two identical triangles with base 10 cm and height 6 cm are joined into a rectangle. Find the rectangle's area.
5. A square of side 10 cm has a triangle cut out with base 10 cm and height 5 cm. Find the area remaining.





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Answers: Area of Triangles**Question 1**

1. 12 cm^2
2. 25 cm^2
3. 42 m^2
4. 36 cm^2
5. 30 cm^2
6. 30 m^2
7. 21 cm^2
8. 60 cm^2

Question 2

1. 6 cm
2. 12 m
3. 7 cm
4. 48 cm^2
5. The height must be the straight distance from the base to the opposite point. A slanted side is longer and would give too large an answer.
6. 18 cm^2

Question 3

1. 20 m^2
2. $12 \text{ m}^2 \times \$15 = \$180$
3. 1 m
4. 60 cm^2
5. 75 cm^2

