



SKILL 9: Area of Triangles

The area of a triangle equals half the area of a rectangle whose base and height are the same as the triangle's. You can find the area of a triangle by calculating the area of the rectangle that surrounds it and dividing that in half. You can also use the area formula for a triangle.

Example

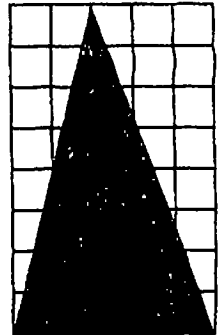
Find the area of this triangle.

Method One: The area of the rectangular grid is 5×8 , or 40 square units. Since the triangle on the grid covers only half of the squares, the area of the triangle is half of 40, or 20 square units.

Method Two: Use the formula $\text{base} \times \text{height} \div 2 = \text{area}$.
The base of the triangle is 5 units.

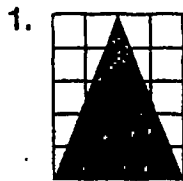
The height of the triangle is 8 units. $5 \times 8 \div 2 = 20$

The area of the triangle is 20 square units.



Guided Practice

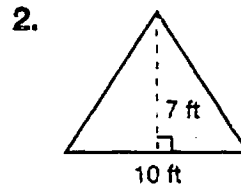
Find each area.



Base _____ Height _____

_____ \times _____ $\div 2 =$ _____

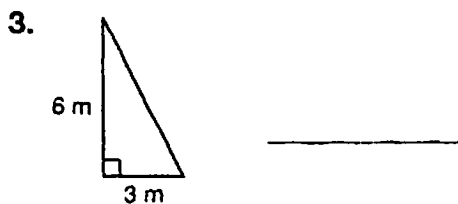
Area _____

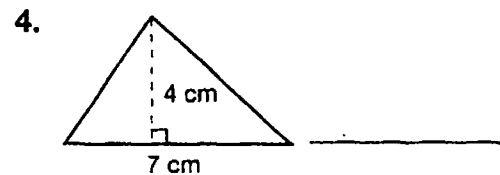


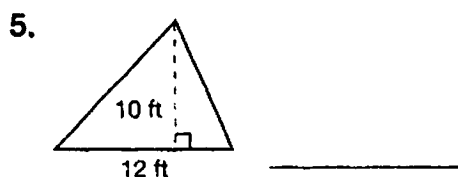
Base _____ Height _____

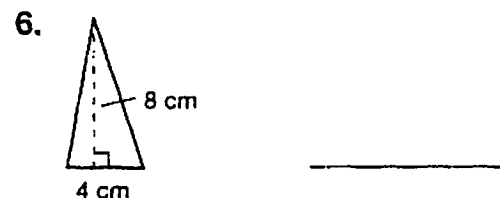
_____ \times _____ $\div 2 =$ _____

Area _____



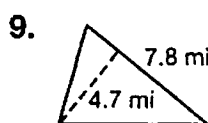
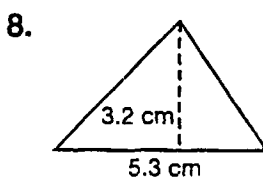
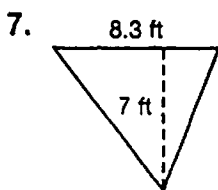
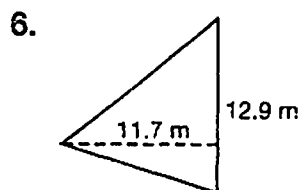
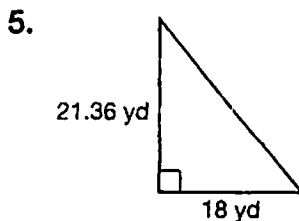
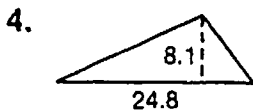
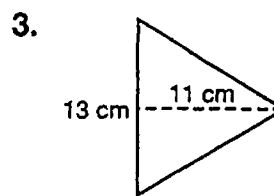
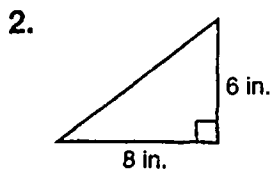
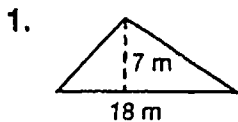






SKILL 9: Practice

Find the area of each triangle. The dashed line is a height.



Find the area if b is the base and h is the height of the triangle.

10. $b = 12$ ft, $h = 5$ ft

11. $h = 9$ cm, $b = 11$ cm

12. $b = 4.2$ mi, $h = 6$ mi

13. $h = 7.3$, $b = 12.4$

14. $b = 8.37$ in., $h = 10.4$ in.

15. $h = 2.8$ km, $b = 5.8$ km

Solve.

16. The state of New Hampshire has the approximate shape of a triangle with base 90 mi and height 180 mi. Estimate the area of New Hampshire.
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TEST PREP

17. What is the area of the triangle?

Skill 9

- A 6.1 ft²
 B 4.37 ft²
 C 7.34 ft²
 D 8.74 ft²



18. Which of the following is the number of grams in 5.8 kilograms?

Skill 2

- F 0.58 g H 580 g
 G 58 g J 5,800 g