ALBERT

Name _____ Date _____

Area of Triangles and Polygons Worksheet

Grade 6 · Common Core 6.G.A.1

> Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

Practice

Builds the skill step by step.

1. Find the area of a right triangle with legs of 6 cm and 8 cm.

2. Find the area of a triangle with a base of 10 inches and a height of 7 inches.

3. Find the area of a parallelogram with a base of 9 m and a height of 4 m.

4. Which formula gives the area of a triangle?

   A. $A = bh$

   B. $A = \frac{1}{2}bh$

   C. $A = 2bh$

   D. $A = b + h$

5. Find the area of a rectangle that is 12 feet long and 5 feet wide.

6. Find the area of a triangle with a base of 5 cm and a height of 3 cm.

7. A square has sides of 7 yards. What is its area?

8. A rectangle 8 cm by 6 cm is cut along a diagonal into two triangles. What is the area of one triangle?

   A. 24 cm^2

   B. 48 cm^2

   C. 14 cm^2

   D. 12 cm^2

9. Find the area of a parallelogram with a base of 11 inches and a height of 6 inches.

10. Find the area of a triangle with a base of 14 m and a height of 9 m.

Area of Triangles and Polygons Worksheet

Grade 6 · Common Core 6.G.A.1

On Level

Grade-level practice.

1. Find the area of a trapezoid with bases of 6 cm and 10 cm and a height of 5 cm.

2. Find the area of a triangle with a base of 4.5 feet and a height of 6 feet.

3. An L-shaped room is made of a 10 ft by 8 ft rectangle joined to a 4 ft by 3 ft rectangle. What is its total area?

4. A rhombus has diagonals of 10 cm and 6 cm. It splits into 4 right triangles with legs of 5 cm and 3 cm. What is its area?

   A. 60 cm^2

   B. 15 cm^2

   C. 30 cm^2

   D. 16 cm^2

5. A triangle has an area of 36 square inches and a base of 9 inches. What is its height?

6. Find the area of a trapezoid with bases of 3 m and 7 m and a height of 4 m.

7. A pentagon is made of a 6 cm by 6 cm square with a triangle on top. The triangle has a base of 6 cm and a height of 4 cm. Find the pentagon's area.

8. Find the area of a right triangle with legs of $\frac{1}{2}$ yard and $\frac{3}{4}$ yard.

9. A parallelogram has a base of 12 m, a slanted side of 7 m and a height of 5 m. What is its area?

   A. 84 m^2

   B. 60 m^2

   C. 35 m^2

   D. 38 m^2

10. A garden is a 20 ft by 15 ft rectangle with a 5 ft by 5 ft square corner removed for a shed. What is the garden's area?

Area of Triangles and Polygons Worksheet

Grade 6 · Common Core 6.G.A.1

Challenge

Multi-step and word problems that stretch it.

1. A sail is shaped like a triangle with a base of 8 feet and a height of 12 feet. Sail fabric costs $3.50 per square foot. How much does the fabric cost?

2. A trapezoid has an area of 54 square cm, a height of 6 cm and one base of 7 cm. What is the other base?

3. A hexagon is split into a rectangle 10 m by 6 m and two triangles, each with a base of 6 m and a height of 4 m. What is the hexagon's area?

4. Two triangles have the same base. Triangle A has twice the height of Triangle B. How do their areas compare?

   A. A's area is four times B's.

   B. A's area is twice B's.

   C. They are equal.

   D. A's area is half of B's.

5. A rectangular lawn is 24 m by 18 m. A triangular flower bed with a base of 6 m and a height of 5 m is cut out of it. How much grass is left?

6. Kai says the area of a triangle with base 10 cm and height 6 cm is 60 cm^2. What mistake did he make, and what is the correct area?

7. A wall is 12 ft by 9 ft with a 3 ft by 4 ft window. One can of paint covers 32 square feet. How many cans are needed to paint the wall, not the window?

8. A right triangle has legs of 9 inches and 12 inches and a longest side of 15 inches. What is its area?

9. A parallelogram and a triangle have the same base of 8 cm. The parallelogram's area is 40 cm^2, and the triangle has the same height. What is the triangle's area?

10. A kite has diagonals of 14 inches and 9 inches. Its area is half the product of the diagonals. What is its area?