Name_____ Date_____ Period_____

LESSON 5-4 · SESSION 2 · PREREQUISITE PRACTICE B · SKILL 1 OF 2

Area of Triangles

Builds on Lesson 5-2 Session 1 · 6.G.A.1

TODAY'S LESSON	You will add a triangle roof to a rectangle, like ½ × 26 × 11 for the house front.
YOU NEED TO	Find a triangle's area with A = ½ × b × h, like ½ × 18 × 7. **You will use it in Practice Form A, problems 2, 6, and 8.**

STEPS TO FOLLOW

use these same steps on every problem

1. **Write** A = ½ × b × h with the numbers.
2. **Halve** the even number first.
3. **Multiply** what is left. Write square units.

WATCH ME

the steps in action

A roof triangle has a base of 18 ft and a height of 7 ft. Find its area.

Step 1 A = ½ × 18 × 7.

Step 2 Half of 18 is 9.

Step 3 9 × 7 = 63, so 63 ft².

Answer **63 ft²**

TRY IT WITH HELP

fill in each step

1. Base 16 ft, height 6 ft. Find the area.

Step 1 A = ½ × _____ × _____

Step 2 Half of 16 is _____

Step 3 8 × 6 = _____ ft²

2. Base 18 in, height 5 in. Find the area.

Step 1 A = ½ × _____ × _____

Step 2 Half of 18 is _____

Step 3 9 × 5 = _____ in²

YOUR TURN

use the steps on your own

3. Find each area. Use A = ½ × b × h.

a. ½ × 12 × 10 = _____ **b.** ½ × 26 × 9 = _____ **c.** ½ × 30 × 7 = _____

d. ½ × 16 × 11 = _____ **e.** ½ × 22 × 8 = _____ **f.** ½ × 9 × 6 = _____

Area of Regular Polygons

Builds on Lesson 5-4 Session 1 · 6.G.A.1

TODAY'S LESSON	You will split a figure into pieces, like the 18 m patio into 5 triangles.
YOU NEED TO	Split a regular polygon into equal triangles. Find one, then multiply. **You will use it in Session 1 Practice Form A, problem 6.**

STEPS TO FOLLOW

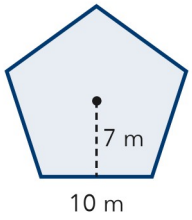
use these same steps on every problem

1. **Count** the sides. That is the number of center triangles.
2. **Find** one triangle: ½ × side × apothem.
3. **Multiply** one triangle by the number of triangles.

WATCH ME

the steps in action

A regular pentagon has sides of 10 m and an apothem of 7 m. Find its area.



Step 1 A pentagon has 5 sides, so 5 triangles.

Step 2 ½ × 10 × 7 = 35.

Step 3 5 × 35 = 175.

Answer **175 m²**

TRY IT WITH HELP

fill in each step

4. A regular hexagon has sides of 8 in and an apothem of 7 in. Find its area.

Step 1 Number of triangles: _____

Step 2 ½ × 8 × 7 = _____ in²

Step 3 6 × 28 = _____ in²

5. A regular octagon has sides of 4 ft and an apothem of 5 ft. Find its area.

Step 1 Number of triangles: _____

Step 2 ½ × 4 × 5 = _____ ft²

Step 3 8 × 10 = _____ ft²

YOUR TURN

use the steps on your own

6. Find the area of each regular polygon.

a. hexagon, side 6, apothem 5 _____

b. pentagon, side 8, apothem 6 _____

c. octagon, side 4, apothem 6 _____

d. square, side 6, apothem 3 _____

READY CHECK

a problem like the one in today's lesson

7. A 10 in by 6 in rectangle has a triangle roof: b = 10 in, h = 4 in. Total area?

A 60 in² **B** 80 in² **C** 100 in² **D** 40 in²

CHECK YOURSELF ☐ I can do this on my own ☐ I need a little help ☐ I have a question about #____