

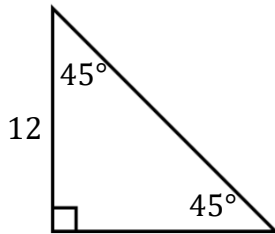
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## Unit 4 Review: Right Triangle Trigonometry

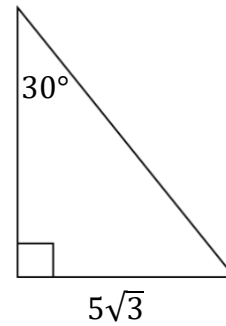
**Topic #1:** I can solve for missing side lengths of special right triangles. (Level 2)

**Directions:** For each of the triangles below, solve for all missing side lengths and angle measures. Leave your answer in **exact form** and **simplify completely**.

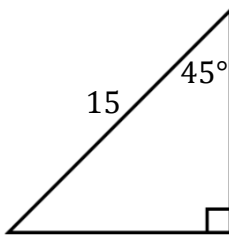
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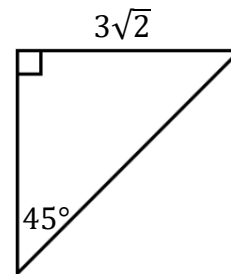
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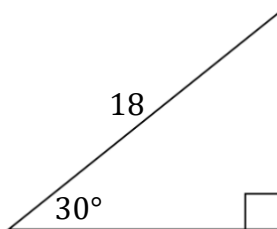
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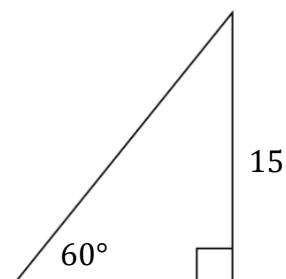
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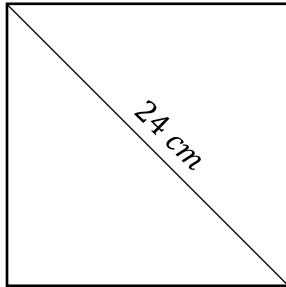
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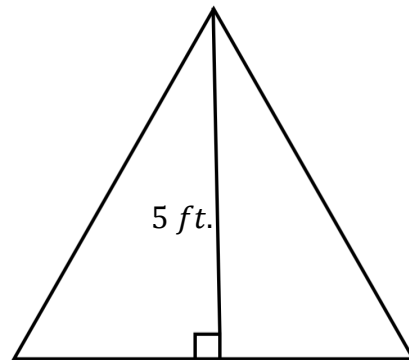
**Topic #2:** I can use properties of special right triangles to solve problems. (Level 3)

**Directions:** Find the area of the shapes below. Leave your answer in **exact form**.

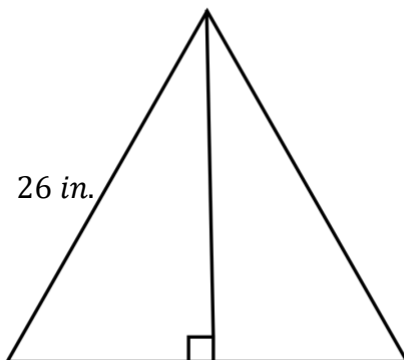
1. Find the area of the **square** below. Leave your answer in exact form.



2. Find the area of the **equilateral triangle** at right. Leave your answer in exact form.

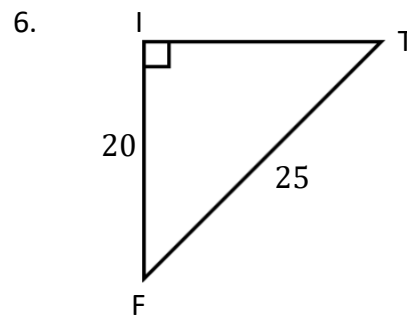
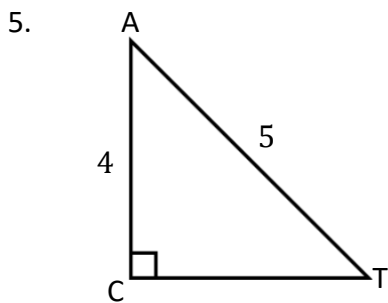
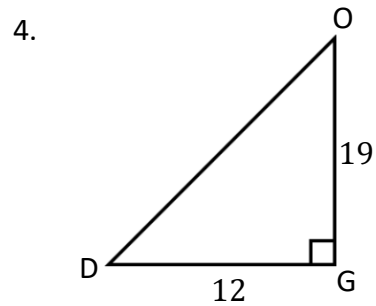
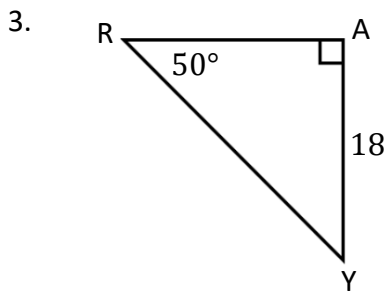
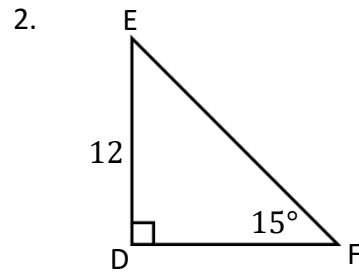
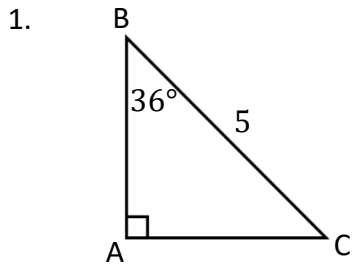


3. Find the area of the **equilateral triangle** at right. Leave your answer in exact form.



**Topic #3:** I can use trigonometric ratios to solve for missing side lengths and angle measures of right triangles. (Level 2)

**Directions:** Find all missing **side lengths** and **angle measures** for the triangles below. Show your trig ratio(s) before giving your final answer. Round each answer to the **nearest tenth**.



7. What is the relationship between the triangle in #5 & the triangle in #6? Explain how you know.

**Topic #4:** I can use trigonometric ratios and special right triangles to solve real world problems.

**Directions:** For each of the problems below, draw a diagram of the situation and answer the question completely. Show all your work and state your final answer clearly.

1. A ladder is leaning up against a wall. The ladder is 6 feet long and is 3 feet away from the wall. Draw and label a diagram of this situation. What is the angle formed by the ladder and the wall? Round to the **nearest degree**.

2. A kite is tied to a stake in the ground. Assume the string is being pulled tight. The length of the string is 12 feet and the angle of elevation from the stake is  $42^\circ$ . Draw and label a diagram of this situation. How high up is the kite? Round your answer to the **nearest tenth**.

3. You are standing 10 feet away from a flag pole. Your angle of elevation looking up at the flag pole is  $60^\circ$ . Draw and label a diagram of this situation. How tall is the flag pole? Leave your answer in **exact form**.

