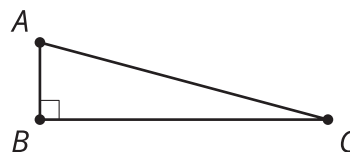


Lesson 4 Practice Problems

1. Angle B is an acute angle in a right triangle. What is a reasonable approximation for angle B if the ratio for the opposite leg divided by the hypotenuse is 0.67?

2. Estimate the values to complete the table.



angle	adjacent leg \div hypotenuse	opposite leg \div hypotenuse	opposite leg \div adjacent leg
A			
C	0.97	0.26	0.27

3. Priya says, "I know everything about a right triangle with a 30 degree angle and a hypotenuse with length 1 cm. Here, look."

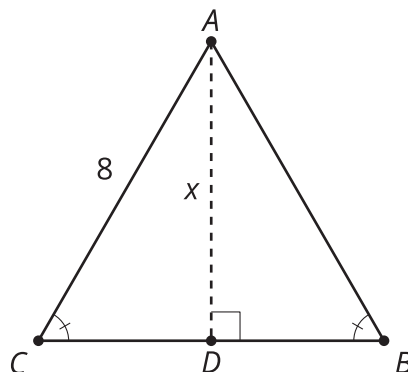
- The other angle is 60 degrees.
- The leg adjacent to the 30 degree angle is 0.866 cm long.
- The side opposite the 30 degree angle is 0.5 cm long.

Han asks, "What would happen if a right triangle with a 30 degree angle has a hypotenuse that is 2 cm instead?"

Help them find the missing angles and side lengths in the new triangle. Explain or show your reasoning.

4. Triangle ABC is equilateral.

- What is the value of x ?
- What is the measure of angle B ?



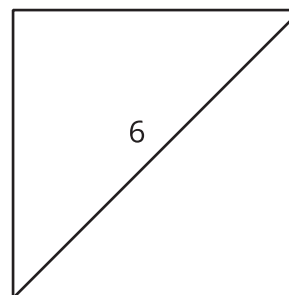
(From Unit 4, Lesson 3.)

5. An equilateral triangle has side length 8 units. What is the area?

- $16\sqrt{3}$ square units
- 24 square units
- $24\sqrt{3}$ square units
- 32 square units

(From Unit 4, Lesson 3.)

6. What is the length of the square's side?



- 3 units
- $\frac{6}{\sqrt{2}}$ units
- $6\sqrt{2}$ units
- 12 units

(From Unit 4, Lesson 2.)

7. A step has a height of 6 inches. A ramp starts 5 feet away from the base of the step, making a 5.7° angle with the ground. What can you say about the angle the ramp would make with the ground if the ramp starts closer to the step?

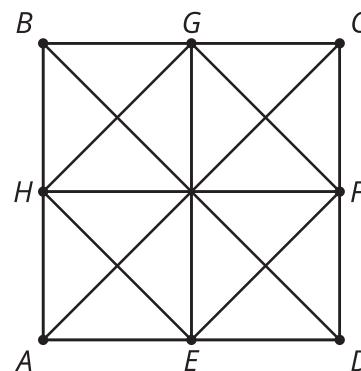
- A. The angle would decrease.
- B. The angle would increase.
- C. The angle would stay the same.
- D. We cannot determine anything about the angle.

(From Unit 4, Lesson 1.)

8. The quilt is made of squares with diagonals.

The length of BD is 4.

- a. Find the length of AE .
- b. Find the area of square $ABCD$.



(From Unit 3, Lesson 12.)