Name _____

Practice Video Tools Games

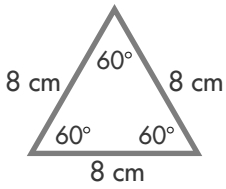
Additional Practice 16-1
Classify Triangles

Another Look!

You can classify triangles by the lengths of their sides and the measures of their angles.

Measures of Angles

Acute
All angles are less than 90°.

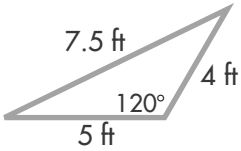


This triangle is both equilateral and acute.

Right
One right angle

This triangle is both isosceles and right.

Obtuse
One obtuse angle



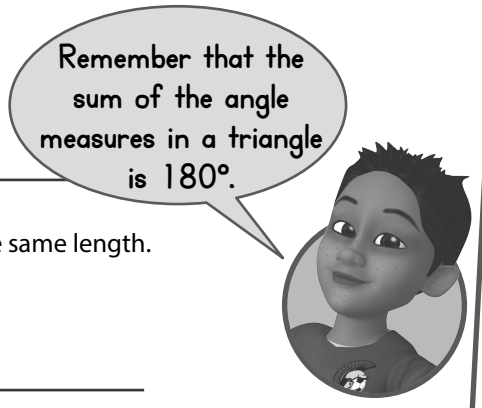
This triangle is both scalene and obtuse.

Lengths of Sides

Equilateral
All sides are the same length.

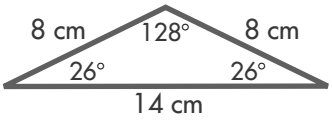
Isosceles
Two sides are the same length.

Scalene
No sides are the same length.



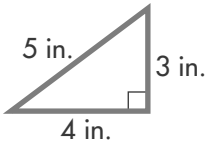
In **1–9**, classify each triangle by its sides and then by its angles.

1.



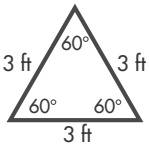
Isosceles, obtuse

2.



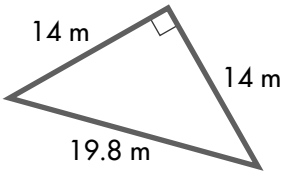
Scalene, right

3.



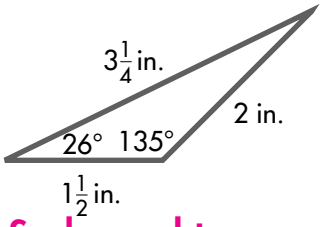
Equilateral, acute

4.



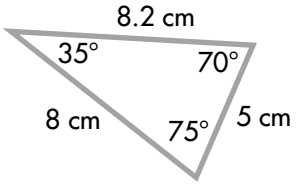
Isosceles, right

5.



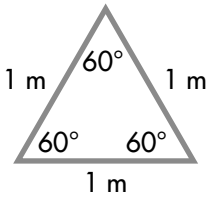
Scalene, obtuse

6.



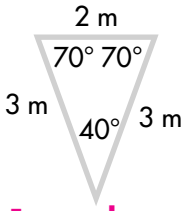
Scalene, acute

7.



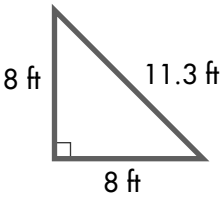
Equilateral, acute

8.



Isosceles, acute

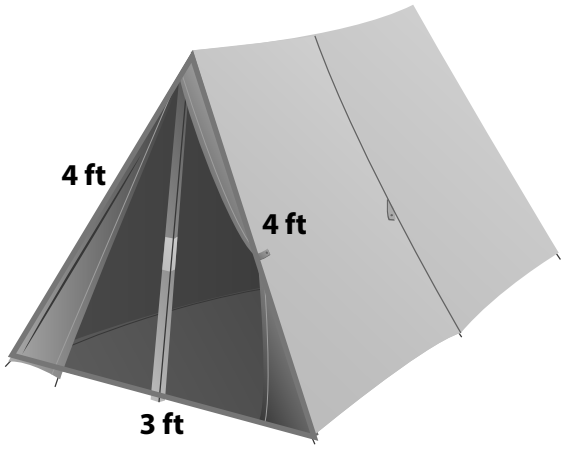
9.



Isosceles, right

10. Judy bought a new tent for a camping trip. Look at the side of the tent with the opening. Classify the triangle by its sides and its angles.

Isosceles, acute



11. Judy bought her tent on sale. The sale price was $70 off the original price. Judy also used a coupon for an extra $15 off. If Judy paid $125 for the tent, what was its original price? Write an equation to show your work.

$210; Sample answer: $p = 125 + 70 + 15$

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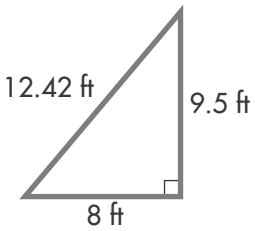
12. **Critique Reasoning** Ted says that the triangle below cannot be classified because all sides are different lengths. Is Ted correct? Explain why or why not.



Ted is not correct. The triangle is a scalene, right triangle.

13. **Higher Order Thinking** The lengths of two sides of a triangle are 15 inches each. The third side measures 10 inches. What type of triangle is this? Explain your answer using geometric terms.

It is an isosceles triangle because two sides are the same length.

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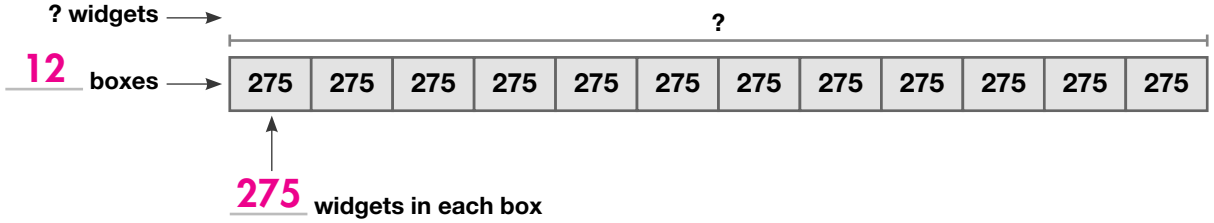
14. A factory ships widgets in crates. There are 12 boxes in each crate. Each box holds 275 widgets. How many widgets are in one crate?

3,300 widgets



Assessment Practice

15. Claire says that she can draw an obtuse equilateral triangle. Is she correct? Explain.

No; Sample answer: An obtuse triangle can have at most 2 equal sides, so it cannot be equilateral.