Name _____

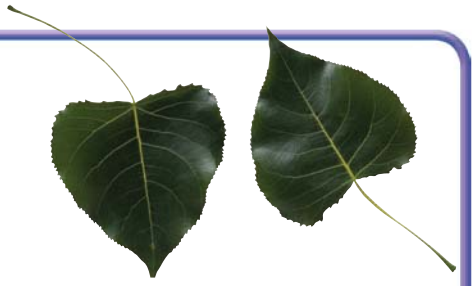
Classify Triangles by Sides

Essential Question How can you classify triangles by the length of their sides?

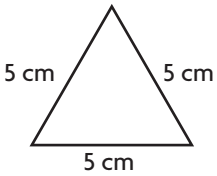
Geometry—4.G.2

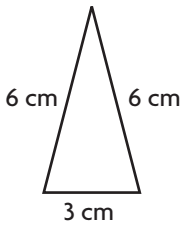
MATHEMATICAL PRACTICES
MP.3, MP.4, MP.6, MP.7

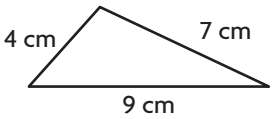
Unlock the Problem



A triangle can also be classified by the lengths of its sides.







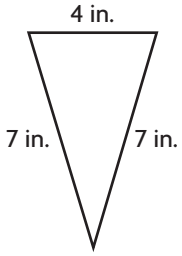
A triangle can have 3 sides that are the same length, 2 sides that are the same length, or no sides that are the same length.

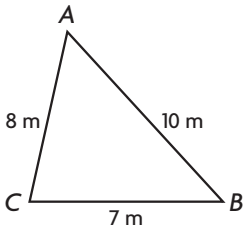
Activity 1 Identify triangles that have 3 sides the same length, 2 sides the same length, or no sides the same length.

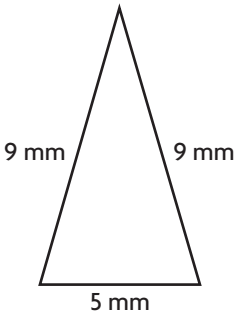
Materials ■ color pencils

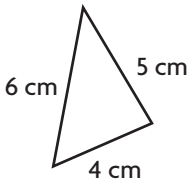
Triangle Color Guide	
Red	3 sides the same length
Blue	2 sides the same length
Orange	0 sides the same length

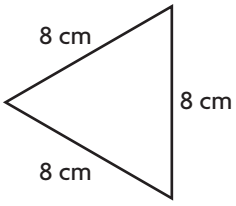
Use the Triangle Color Guide to color the triangles below.

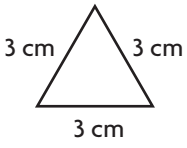








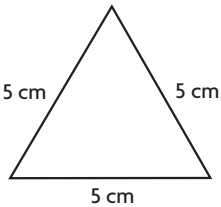




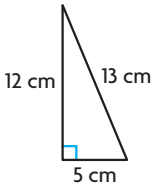
Try This!

a. Name the triangle that has no sides the same length. _____

b. Name the triangle that has 3 sides the same length. _____

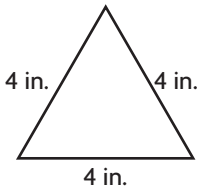


Triangle *A*



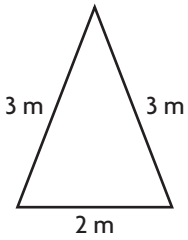
Triangle *B*

An **equilateral triangle** is a triangle that has 3 equal sides.



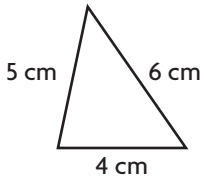
Equilateral Triangle

An **isosceles triangle** is a triangle that has 2 equal sides.



Isosceles Triangle

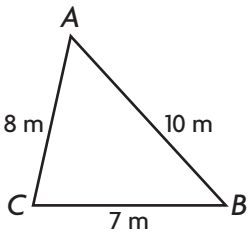
A **scalene triangle** is a triangle that has no equal sides.

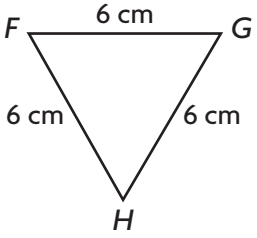


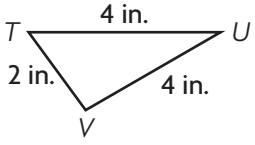
Scalene Triangle

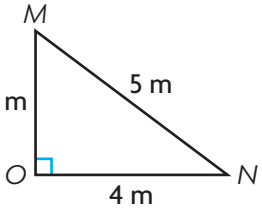
Activity 2 Use a Venn diagram to classify triangles.

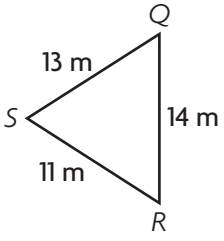
Write the names of the triangles in the Venn diagram

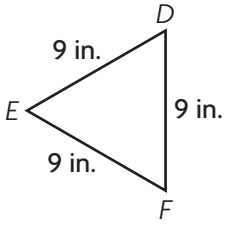




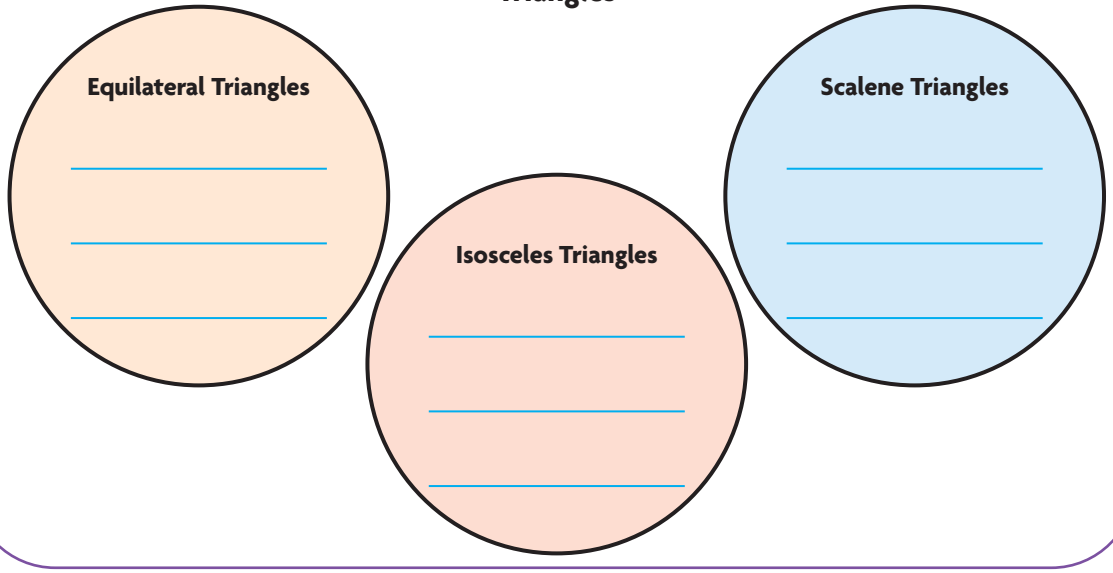








Triangles



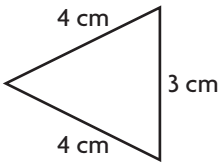
Name _____

Share and Show

MATH BOARD

1. Name the triangle at the right.
Write *equilateral, isosceles,* or *scalene.*

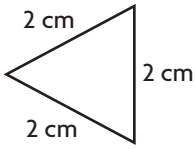
Think: How many equal sides does the triangle have?



_____

Name the triangle. Write *equilateral, isosceles,* or *scalene.*

2.



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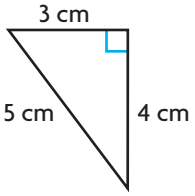
3.



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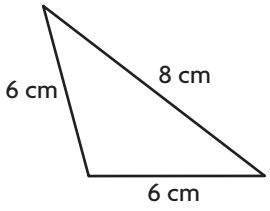

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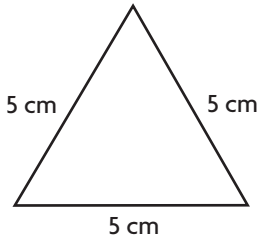
On Your Own

Name the triangle. Write *equilateral, isosceles,* or *scalene.*

5.



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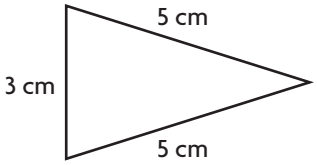
6.



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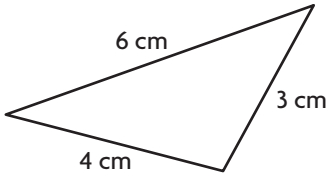
7.



_____

Name the triangle by the lengths of its sides. Write *equilateral, isosceles,* or *scalene.*

8. 12 inches, 12 inches, 12 inches

_____

9. 4 inches, 6 inches, 6 inches

_____

10. 9 inches, 5 inches, 7 inches

_____

11. 14 inches, 7 inches, 14 inches

_____

Problem Solving • Applications

12. THINK SMARTER The American crocodile's head appears to be shaped like a triangle. Classify the shape of the head by the lengths of its sides. Write *isosceles, scalene,* or *equilateral.*

13. THINK SMARTER How are an equilateral triangle and a scalene triangle alike? How are they different? Explain your answer.

14. GO DEEPER I am a triangle. Two of my sides are 5 inches long. My third side is less than 5 inches. None of my angles are right angles. What two names do I have?

WRITE Math
Show Your Work

15. MATHEMATICAL PRACTICE 6 **Explain** how a triangle can be isosceles and obtuse.

16. THINK SMARTER Select the lengths that identify a scalene triangle. Mark all that apply.

- (A) 2 inches, 2 inches, 3 inches
- (B) 3 meters, 4 meters, 5 meters
- (C) 6 feet, 6 feet, 6 feet
- (D) 10 meters, 7 meters, 5 meters
- (E) 8 feet, 3 feet, 8 feet

FOR MORE PRACTICE:
Standards Practice Book