

Warm-Up

Take out your notes and Hw notebook.

Get ready to take notes!

HW Notebook Check on Friday

In this order

Skills Practice #1– Algebra

Skills Practice #3– Algebra

What's Your Proof? Handout

Quiz #2 & Corrections

LT 1.1 Review Packet

LT 1.2 Review Packet

Essential Skill 2: Congruent Triangles

LT 2.1 Classifying Triangles

A decorative graphic consisting of several horizontal lines of varying lengths and colors (teal, light blue, white) extending from the right side of the slide.

Why?

Radio transmission towers are designed to support antennas for broadcasting radio or television signals. The structure of the tower shown reveals a pattern of triangular braces.

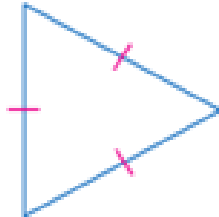
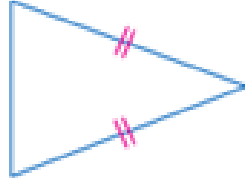
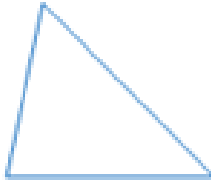
Triangles are the strongest shape to use on bridges.

Learning Objective

I will be able to . . .

- * Identify and classify triangles by angle measures.
(Examples 1 & 2)
- * Identify and classify triangles by side measures.
(Examples 3 & 4)

Glossary: Classify by sides

Vocabulary Term	Definition/Description/Example	Drawing
Equilateral Triangle	3 congruent sides	 A blue equilateral triangle with three pink tick marks on its sides, indicating that all three sides are congruent.
Isosceles Triangle	At least 2 congruent sides	 A blue isosceles triangle with two pink double tick marks on its two slanted sides, indicating that these two sides are congruent.
Scalene Triangle	No congruent sides.	 A blue scalene triangle with no tick marks on its sides, indicating that all three sides are of different lengths.

Example 3a

Use the best description to classify each triangle: *equilateral*, *isosceles*, or *scalene*.

Justify your answer.

Answer:

Isosceles triangle because the triangle has two sides that measure 16 in., so it has at least two congruent sides.



Example 3b

Use the best description to classify each triangle: *equilateral*, *isosceles*, or *scalene*.

Justify your answer.

Answer:

Equilateral triangle because it has 3 congruent sides.



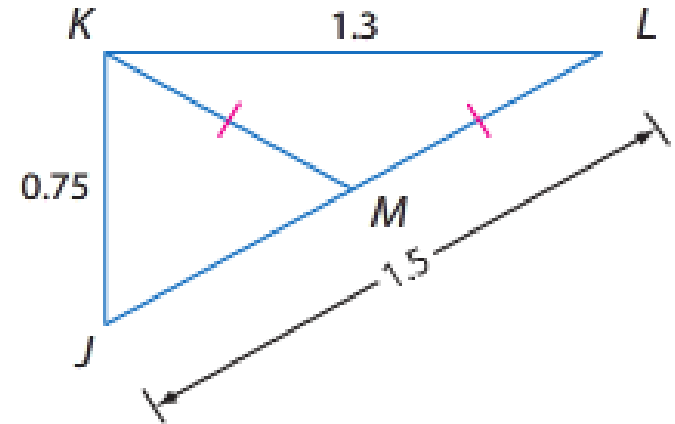
Example 4a

If point M is the midpoint of segment JL , classify triangle JKM as *equilateral*, *isosceles*, or *scalene*.

Justify your answer.

Answer:

Equilateral triangle because it has 3 congruent sides: segment KM , JM , and KJ



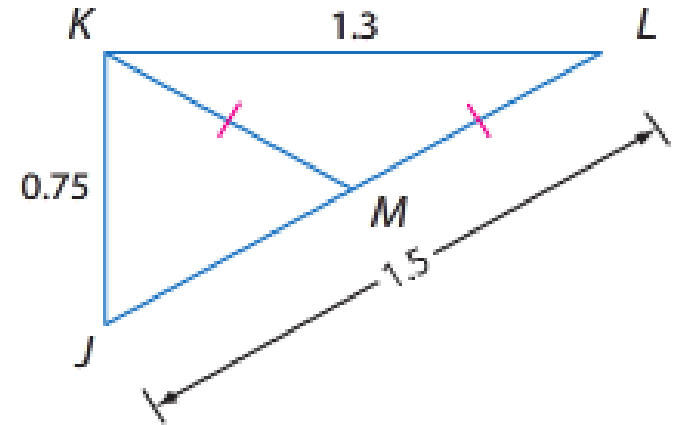
Example 4b

If point M is the midpoint of segment JL , classify triangle KML as *equilateral*, *isosceles*, or *scalene*.

Justify your answer.

Answer:

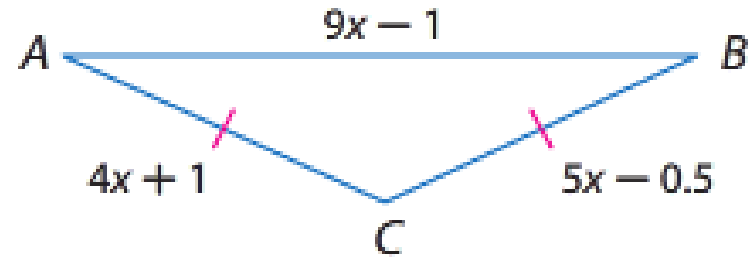
Isosceles triangle because it has at least 2 congruent sides: segment KM and LM .



Example 5a: Algebra

Find the measures of the sides
of triangle ABC.

Justify your answer.



This is an isosceles triangle because it
has at least two congruent sides.

Answer:

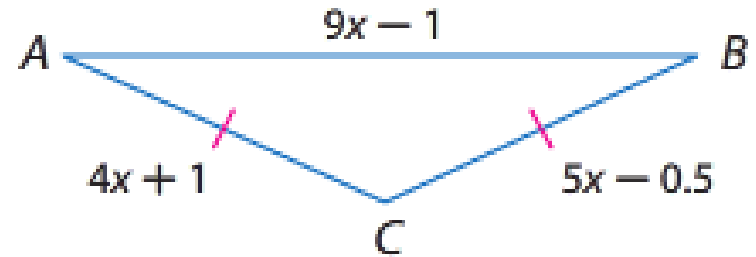
$$4x + 1 = 5x - 0.5$$

$$x = 1.5$$

Example 5a: Algebra

Find the measures of the sides of triangle ABC.

Justify your answer.



Answer:

$$AC = 4x + 1 = 4(1.5) + 1 = 7$$

$$CB = 7$$

$$AB = 9x - 1 = 9(1.5) - 1 = 12.5$$

Example 5b: Algebra

Find the measures of the sides of equilateral triangle FGH .
Justify your answer.

Answer:

$$2y + 5 = 5y - 19$$

$$y = 8$$

$$FG = 2y + 5 = 2(8) + 5 = 21$$

$$GH = 21$$

$$FH = 21$$

