

Warm up:

Find the distance between the pairs of points.

1) $(-4, -1)$ and $(-5, -9)$

$$-4 - (-5) = 1$$

$$-1 - (-9) = 8$$

$$1^2 + 8^2 = d^2$$

$$\sqrt{1 + 64} = \sqrt{65} = d$$

$$8.06 \approx d$$

2) $(4, -2)$ and $(-10, 6)$

$$4 - (-10) = 14$$

$$-2 - 6 = -8 \rightarrow 8$$

$$14^2 + 8^2 = d^2$$

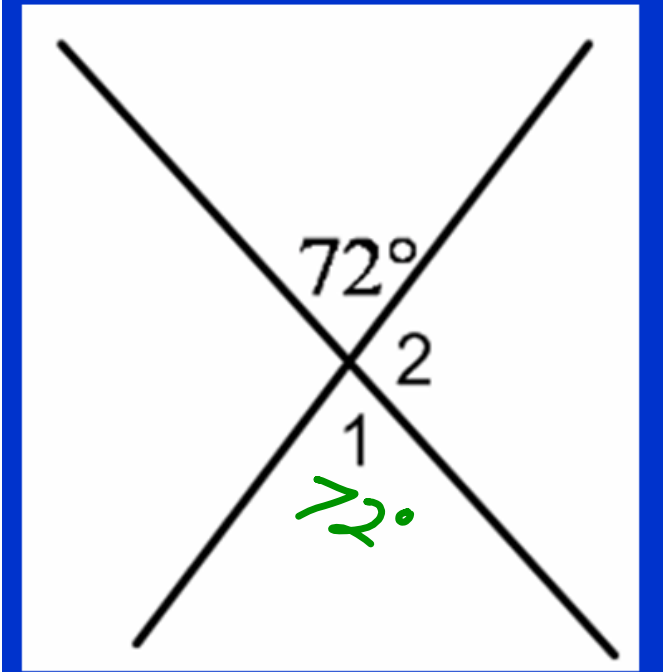
$$196 + 64 = \sqrt{260} = d$$

$$16.12$$

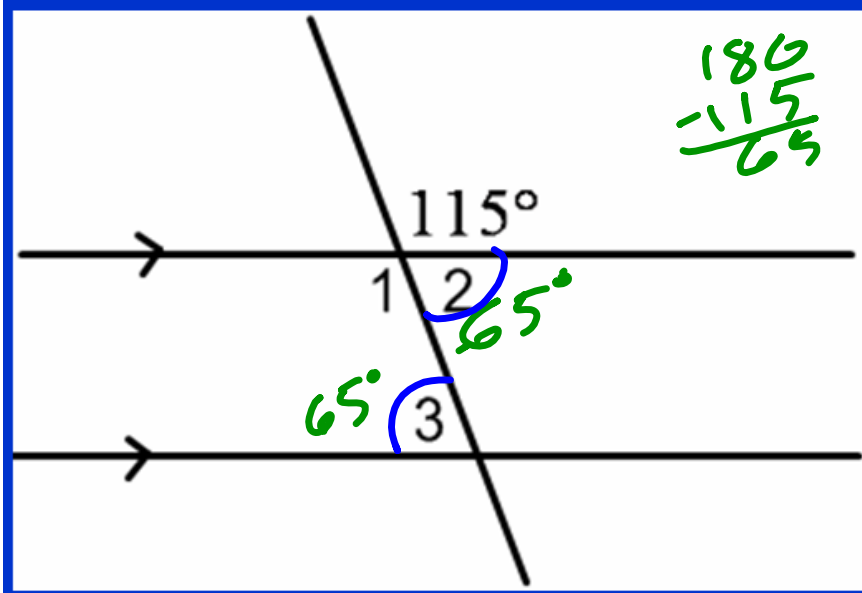
HW Solutions

Showdown

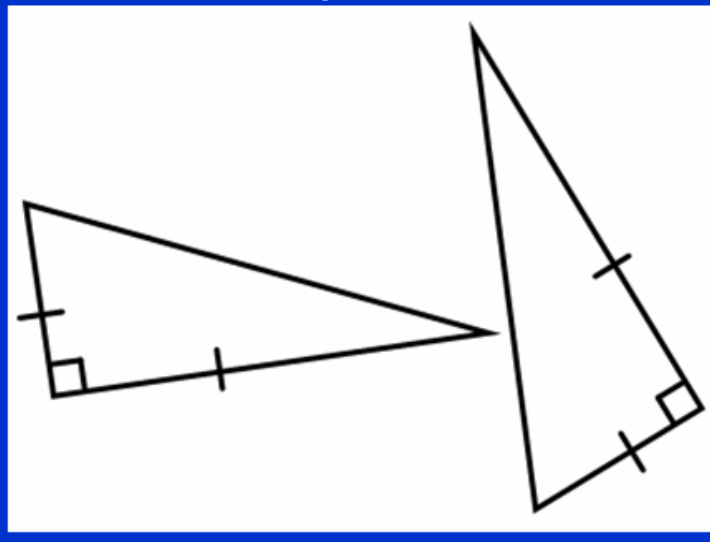
Find $m\angle 1$.



Find $m\angle 3$.

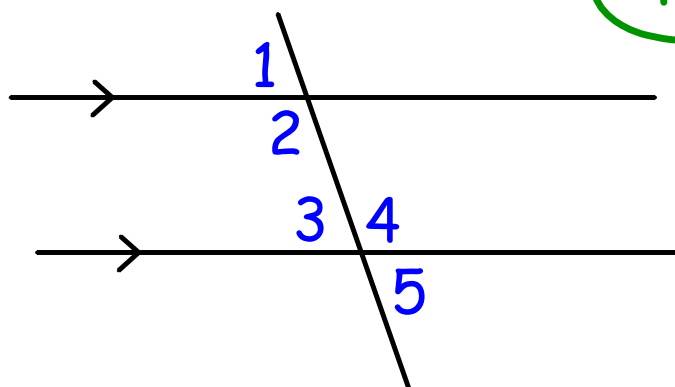


Are the following triangles congruent? Explain why or why not.



yes
SAS

What are examples of alternate exterior angles in the picture?



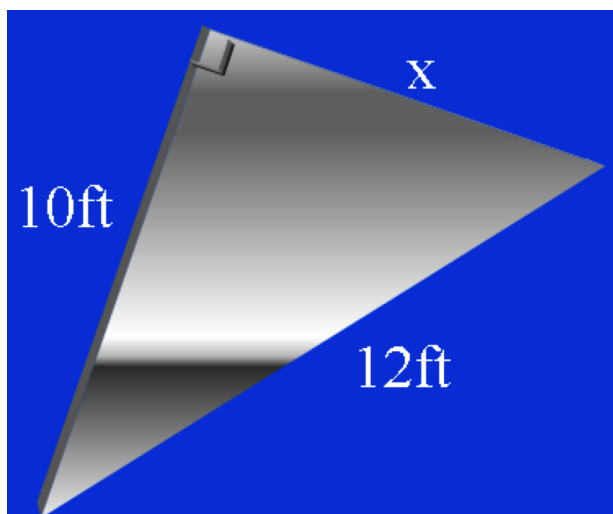
1+5

What is the distance between $(-3, -4)$ and $(-9, -6)$?

$$\begin{aligned} -3 - (-9) &= 6 \\ -4 - (-6) &= -2 \rightarrow 2 \end{aligned}$$

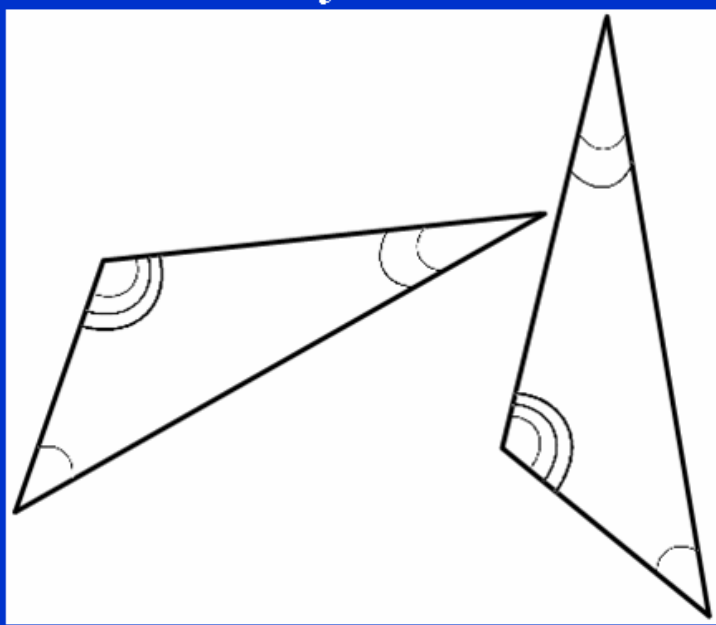
$$\begin{aligned} 6^2 + 2^2 &= d^2 \\ 36 + 4 & \\ \sqrt{40} &= \sqrt{1^2} \\ 6.32 & \end{aligned}$$

Solve for x . Round the nearest hundredth if necessary.



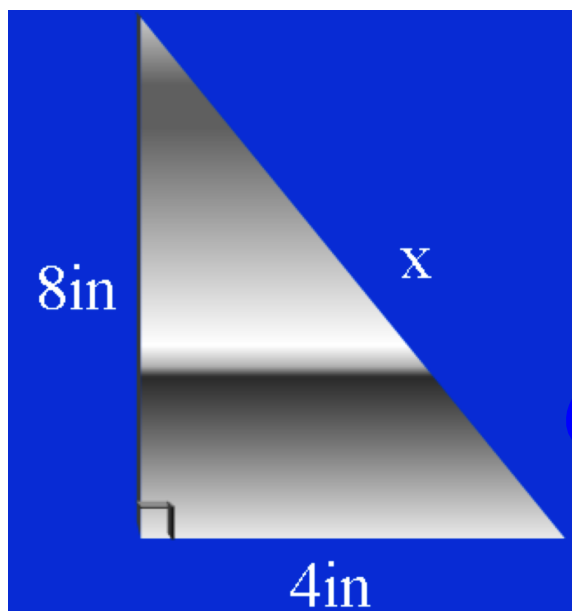
$$\begin{aligned}x^2 + 10^2 &= 12^2 \\x^2 + 100 &= 144 \\-100 &\quad -100 \\ \hline \sqrt{x} &= \sqrt{44} \\x &\approx \textcircled{6.63\text{ft}}\end{aligned}$$

Are the following triangles congruent? Explain why or why not.



no

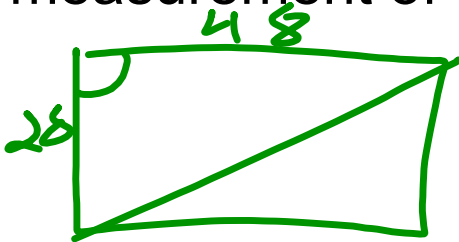
Solve for x . Round the nearest hundredth if necessary.



$$4^2 + 8^2 = x^2$$
$$16 + 64 = x^2$$
$$\sqrt{80} = \sqrt{x^2}$$

$$8.94 \text{ in}$$

You see a TV at a garage sale that is 48 inches wide and 28 inches tall. What is the diagonal measurement of the TV?



$$\begin{aligned} 28^2 + 48^2 &= x^2 \\ 784 + 2304 & \\ \sqrt{3088} &= \sqrt{x^2} \\ 55.57 \text{ in} & \end{aligned}$$

What is the distance between $(-4, 9)$ and $(-3, -2)$?

$$-4 - (-3) = -1 \rightarrow 1$$

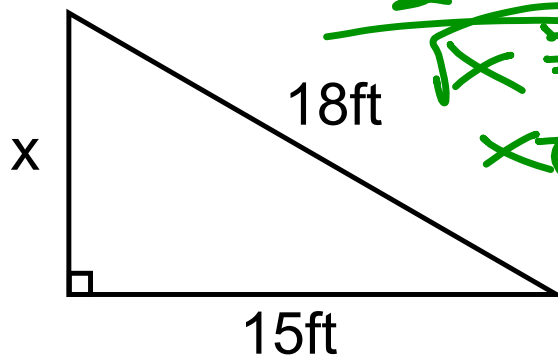
$$-2 - 9 = -11 \rightarrow 11$$

$$1^2 + 11^2 = x^2$$

$$\sqrt{1 + 121} = \sqrt{x^2}$$

$$11.05$$

Solve for x.



$$x^2 + 15^2 = 18^2$$

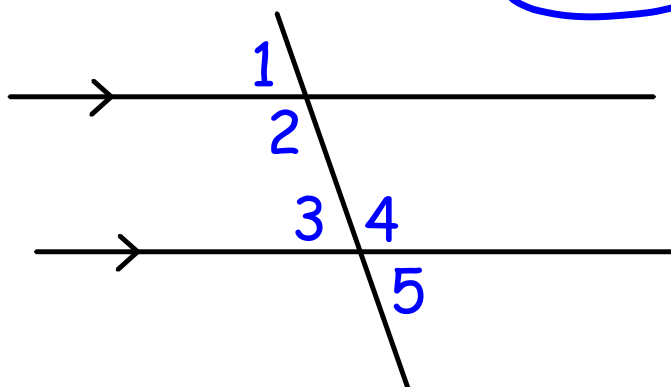
$$x^2 + 225 = 324$$

$$- 225 \quad - 225$$

$$\sqrt{x} = \sqrt{99}$$

$$x = 9.95ft$$

Give an example of vertical angles in the picture.



3 + 5

Can the following side lengths be used to form a right triangle?

no

4cm, 6cm, 9cm

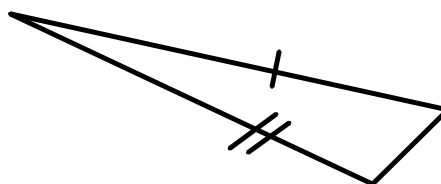
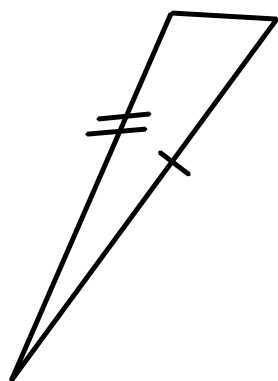
$$4^2 + 6^2 \stackrel{?}{=} 9^2$$

$$16 + 36$$

$$52 \neq 81$$

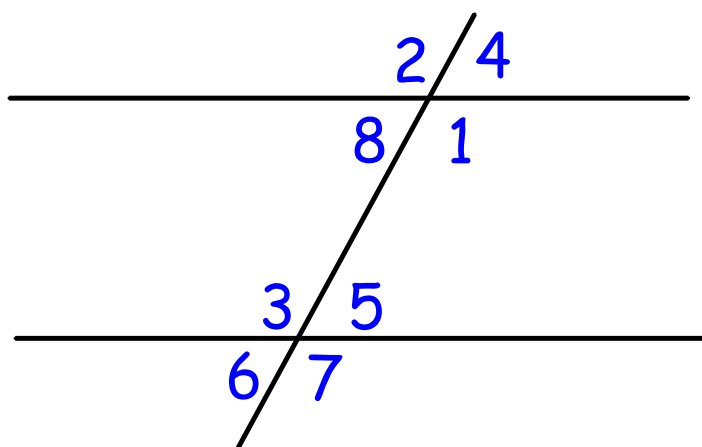
no

Are the following triangles congruent? If so, explain.



no

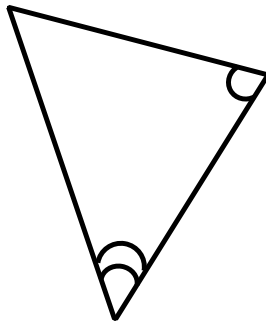
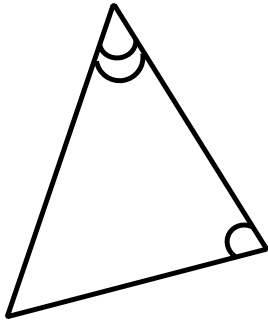
Give an example of alternate interior angles in the picture.



$$1 + 3$$

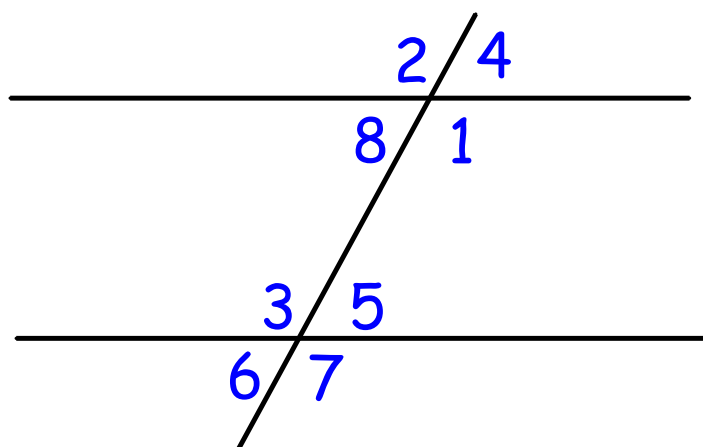
$$5 + 8$$

What is true about the following triangles?



they are similar

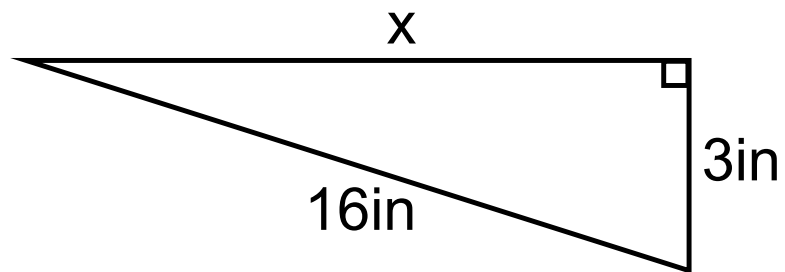
Give an example of corresponding angles in the picture.



4 + 5

A rope is tied to the top of the mast of a sailboat and attached to the deck at a point 5 feet from the base of the mast. If the rope is 20 feet long, how tall is the mast?

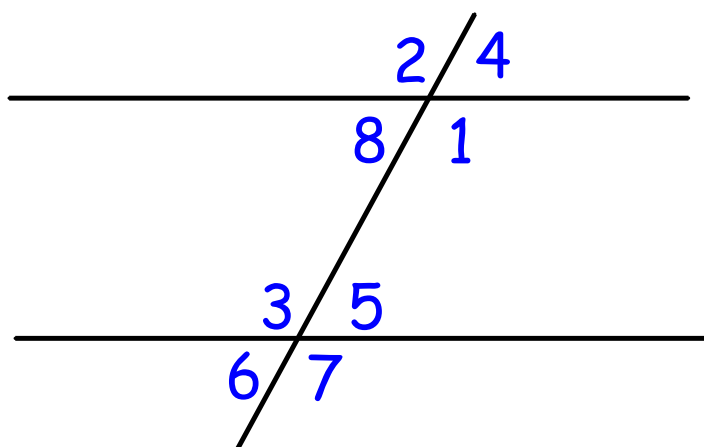
Solve for x .



Can the following side lengths be used to form a right triangle?

5m, 8m, 11m

Give an example of vertical angles in the picture.



Give an example of alternate exterior angles in the picture.

