

**Warm up:**

Find the distance between the pairs of points.

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

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

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

$$1^2 + 8^2 = c^2$$

$$\sqrt{1 + 64} = \sqrt{c^2}$$

$$\sqrt{65} = c$$

$$8.06 \approx c$$

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

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

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

$$8^2 + 14^2 = c^2$$

$$64 + 196$$

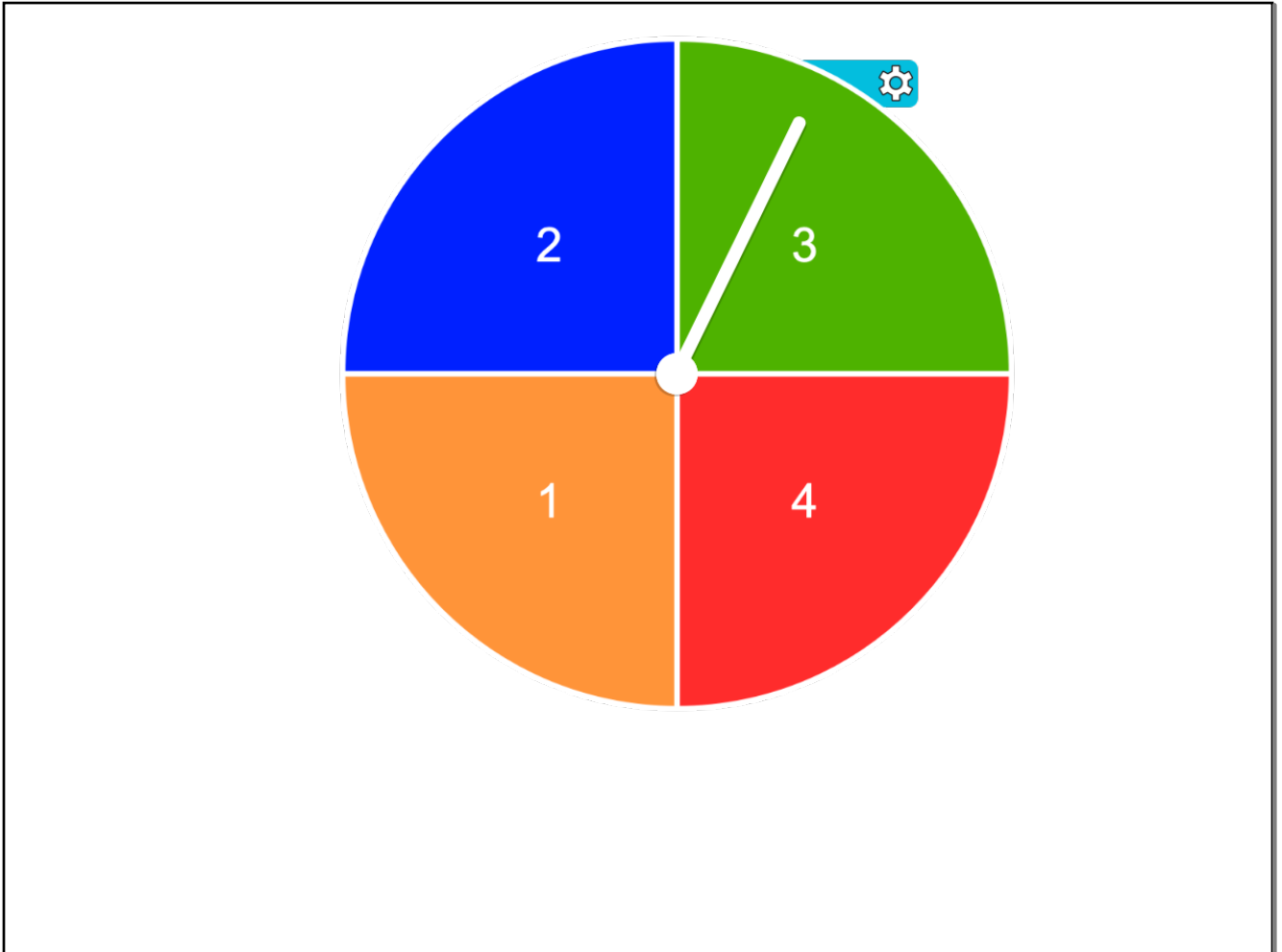
$$\sqrt{260} = \sqrt{c^2}$$

$$16.12 \approx c$$

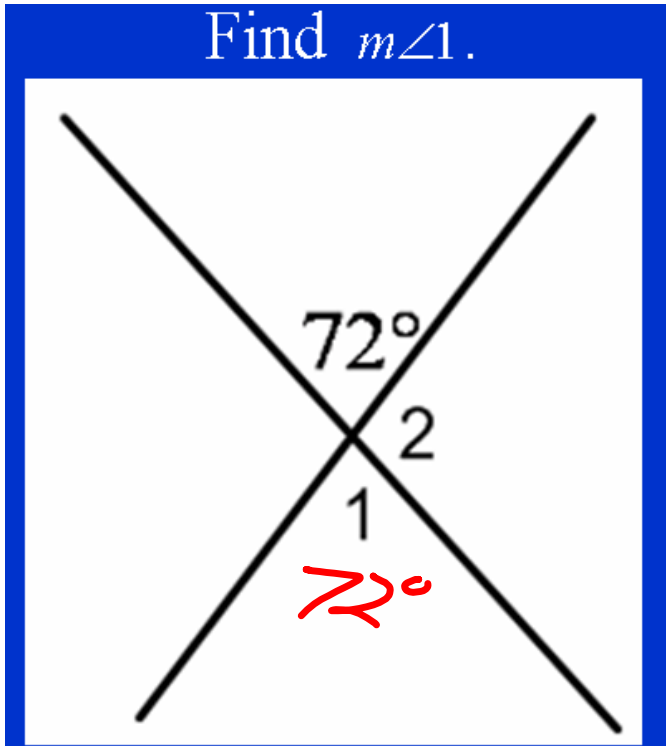
# HW Solutions



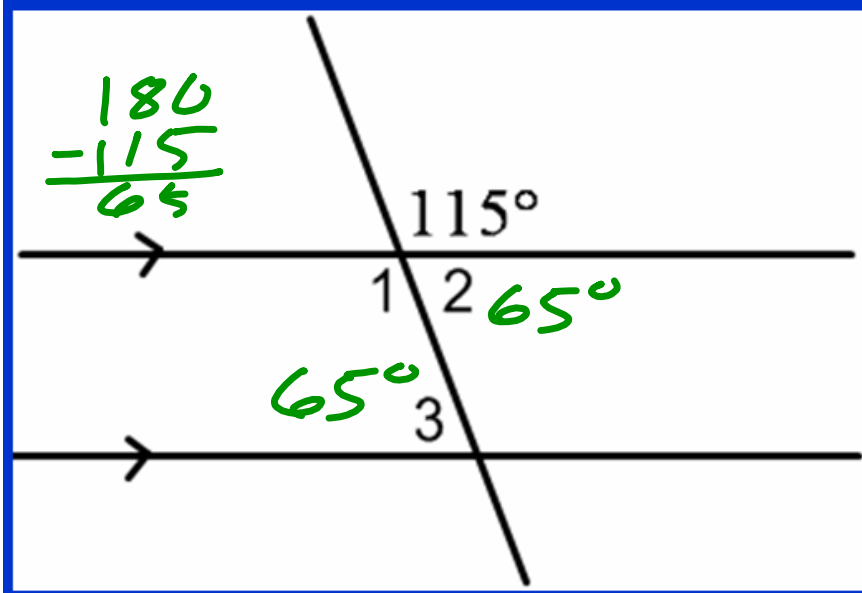
# Showdown



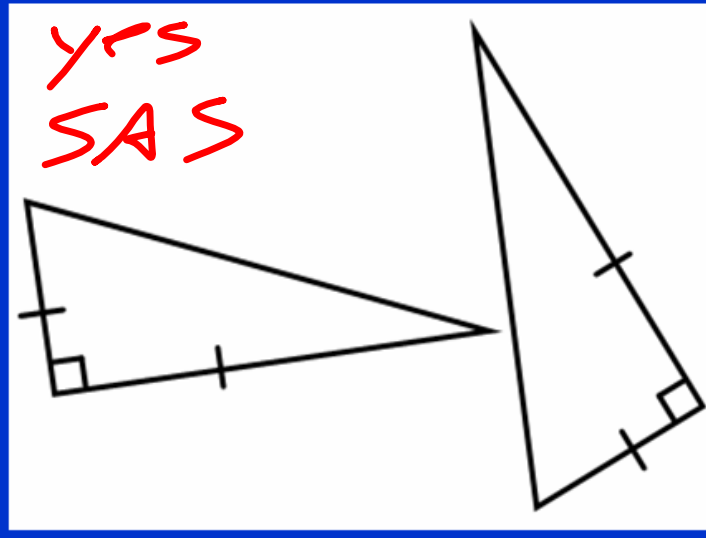
Find  $m\angle 1$ .



Find  $m\angle 3$ .

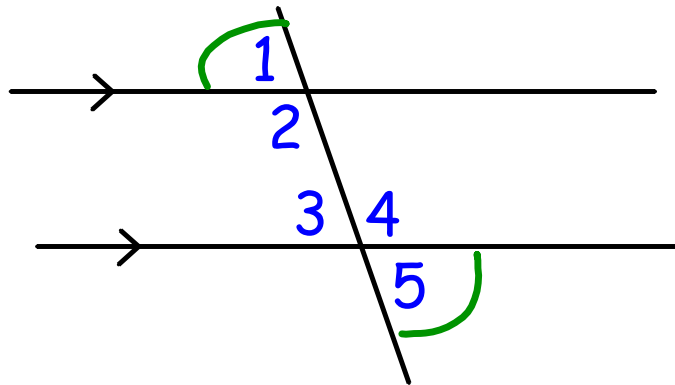


Are the following triangle congruent? Explain why or why not.





What are examples of alternate exterior angles in the picture?



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

$$-3 - (-9) = 6$$

$$-4 - (-6) = 2$$

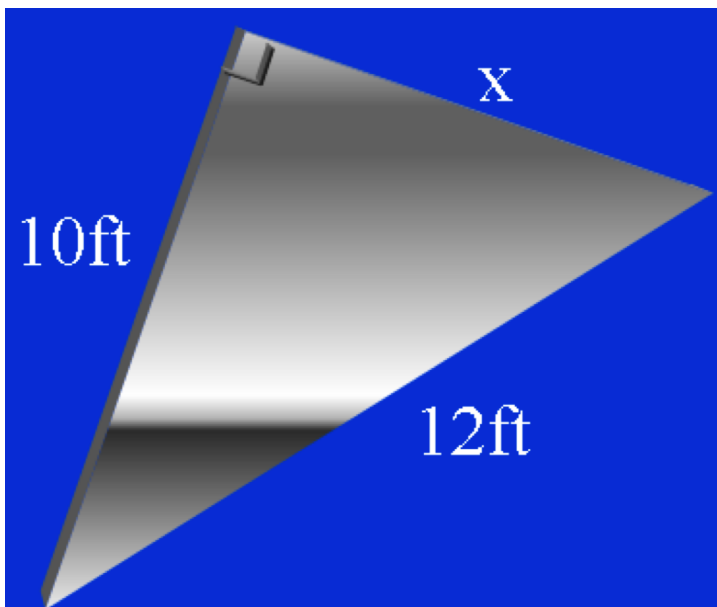
$$6^2 + 2^2 = x^2$$

$$36 + 4$$

$$\sqrt{40} = \sqrt{x^2}$$

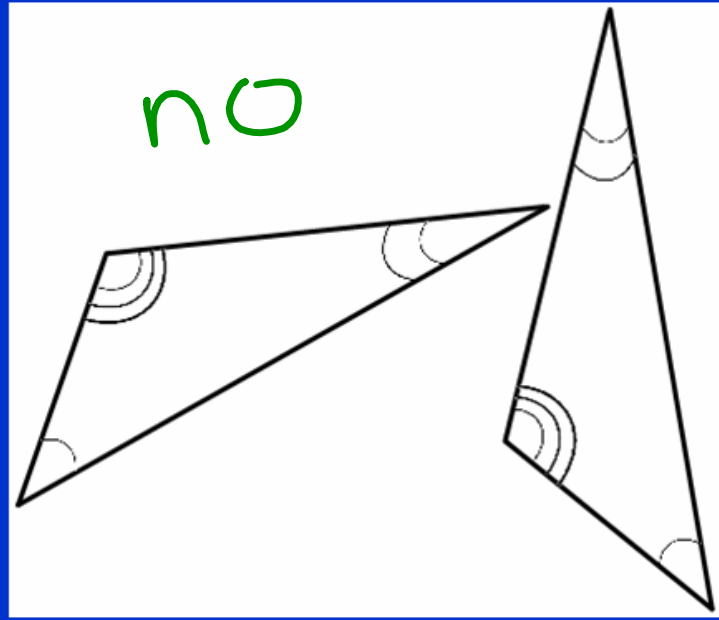
$$6.32$$

Solve for  $x$ . Round the nearest hundredth if necessary.

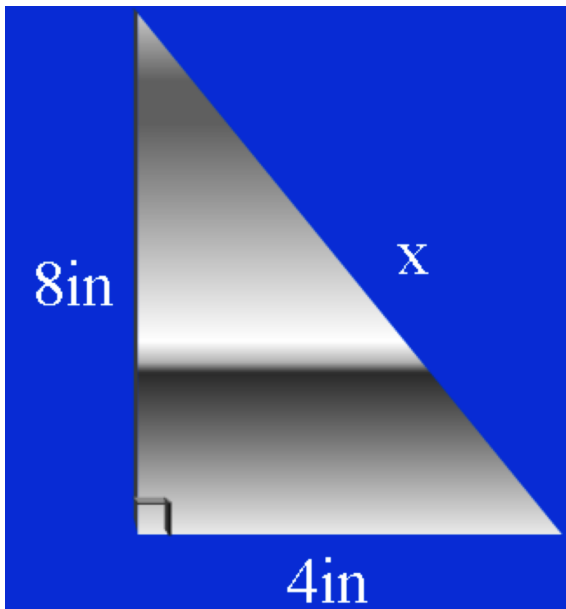


$$\begin{aligned}x^2 + 10^2 &= 12^2 \\x^2 + 100 &= 144 \\-100 &\quad -100 \\ \hline \sqrt{x^2} &= \sqrt{44} \\x &\approx 6.63 \\ &\text{6.63ft}\end{aligned}$$

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

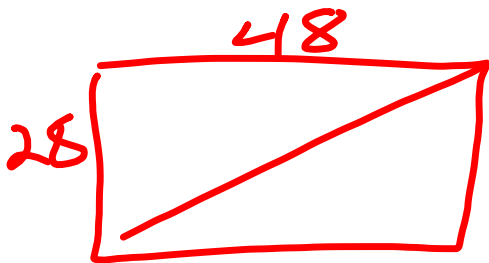


Solve for  $x$ . Round the nearest hundredth if necessary.



$$\begin{aligned}8^2 + 4^2 &= x^2 \\64 + 16 & \\ \sqrt{80} &= \sqrt{x^2} \\8.94 &= x\end{aligned}$$

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?



$$28^2 + 48^2 = x^2$$

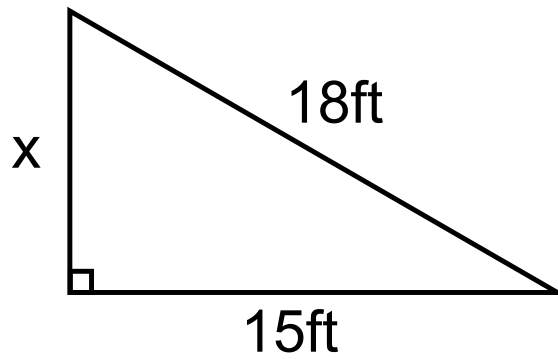
$$784 + 2304$$

$$\sqrt{3088} = x$$

$$55.57 \text{ in}$$

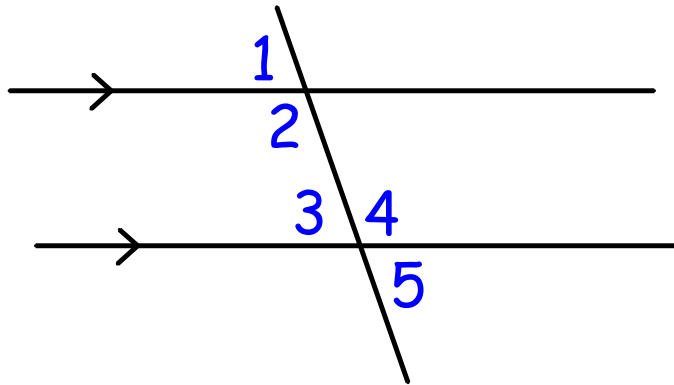
What is the distance between  $(-4, 9)$  and  $(-3, -2)$ ?

Solve for  $x$ .





Give an example of vertical angles in the picture.



3 + 5

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

4cm, 6cm, 9cm

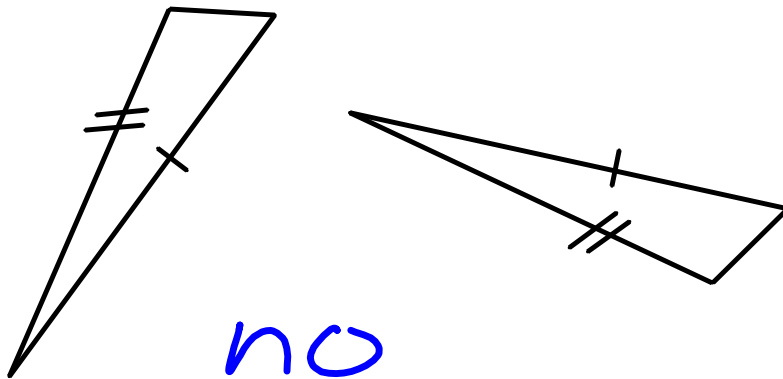
$$4^2 + 6^2 \stackrel{?}{=} 9^2$$

$$16 + 36$$

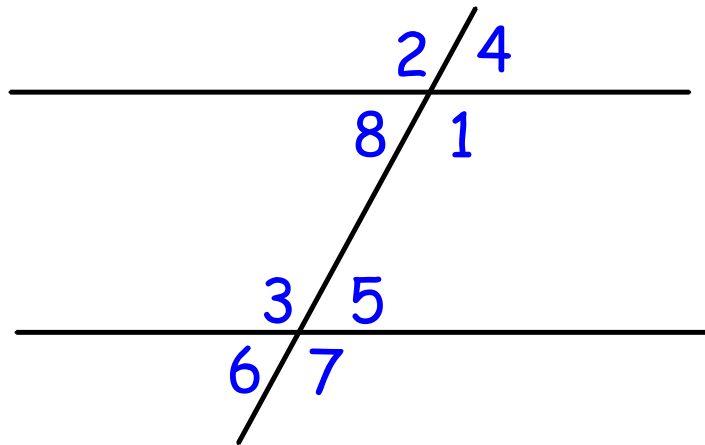
$$52 \neq 81$$

no

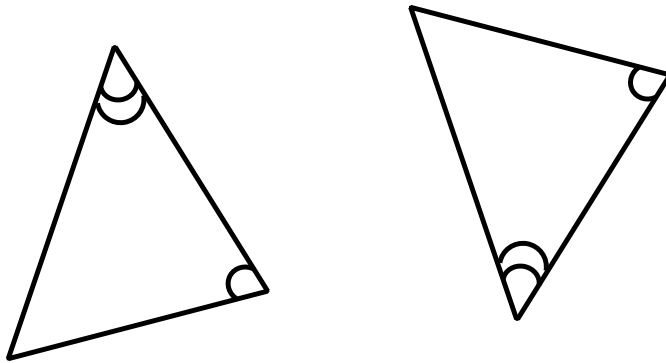
Are the following triangles congruent? If so, explain.



Give an example of alternate interior angles in the picture.

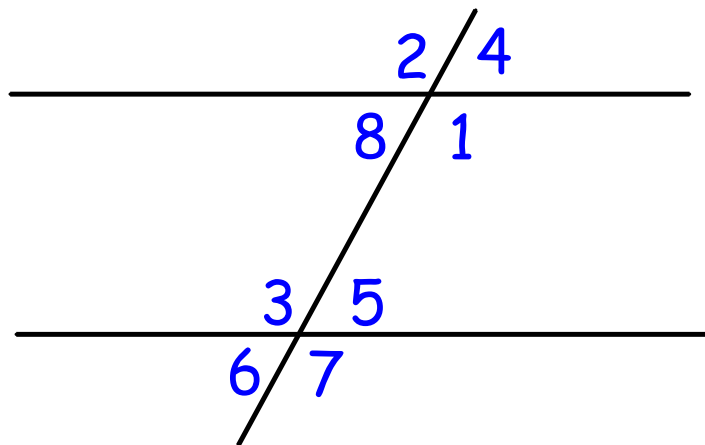


What is true about the following triangles?



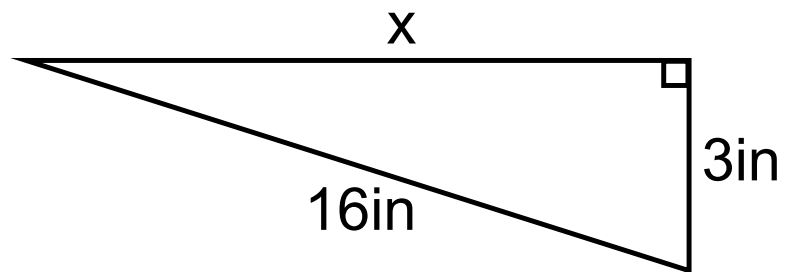
they're similar

Give an example of corresponding angles in the picture.



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  $x$ .

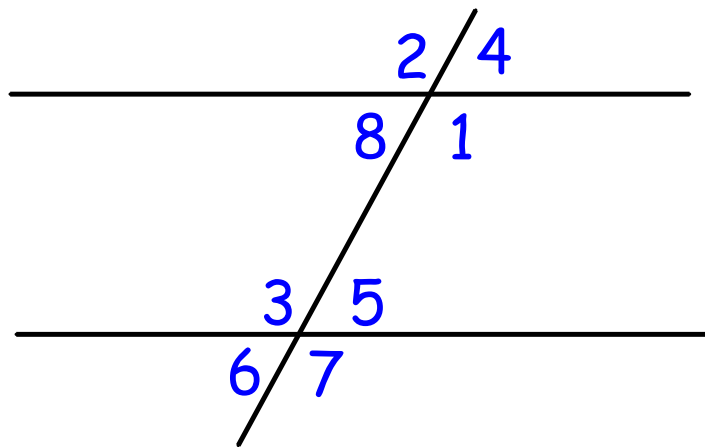




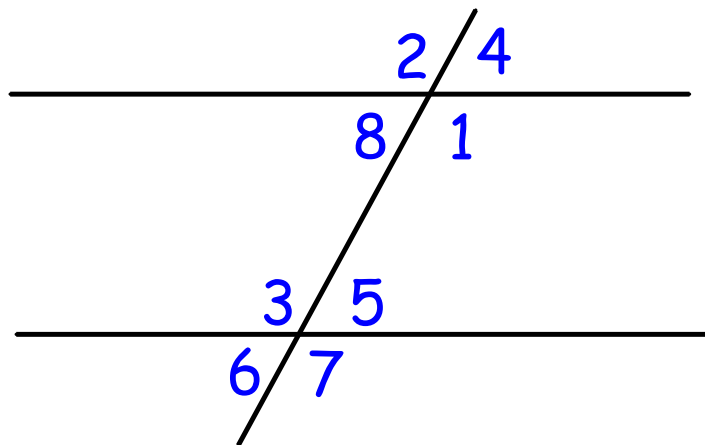
Can the following side lengths be used to form a right triangle?

5m, 8m, 11m

Give an example of vertical angles in the picture.



Give an example of alternate exterior angles in the picture.



March 25, 2022

