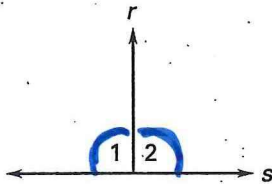


**LESSON 3.6 Practice**  
For use with pages 190-197

→ Theorem 3.8-3.12

What can you **conclude** from the given information? State the **reason** for your conclusion.

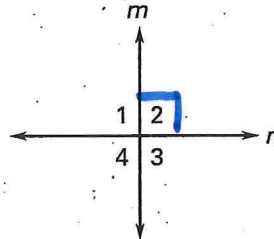
1f1.  $\angle 1 \cong \angle 2$ , then



$r \perp s$ .

Thm 3.8

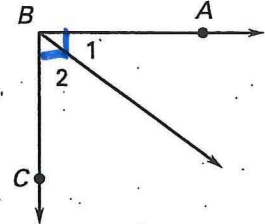
1f.  $n \perp m$ , then



$\angle 1, \angle 2, \angle 3$ , and  $\angle 4$  are right angles (forms 4 rts).

Thm 3.9

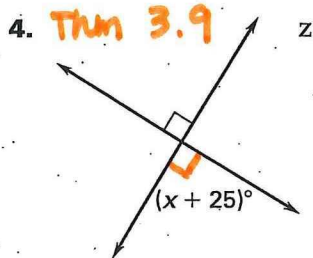
16.  $\vec{BA} \perp \vec{BC}$ , then



$\angle 1$  and  $\angle 2$  are complementary.

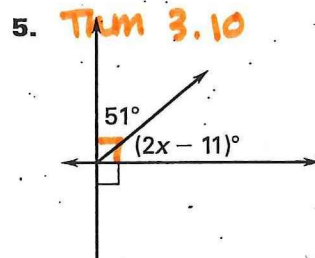
Thm 3.10

Find the value of  $x$ .



$$x + 25 = 90$$

$$\boxed{x = 65}$$

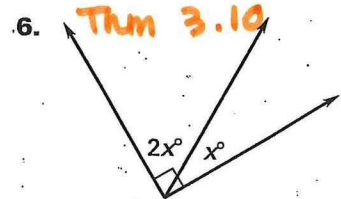


$$51 + 2x - 11 = 90$$

$$2x + 40 = 90$$

$$2x = 50$$

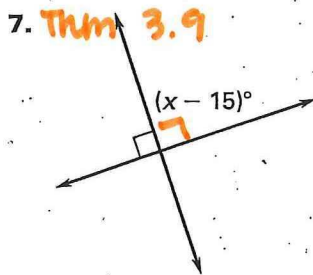
$$\boxed{x = 25}$$



$$2x + x = 90$$

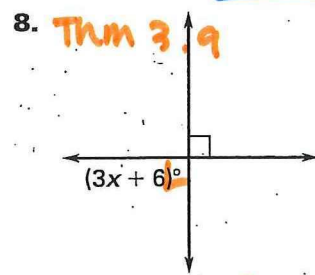
$$3x = 90$$

$$\boxed{x = 30}$$



$$x - 15 = 90$$

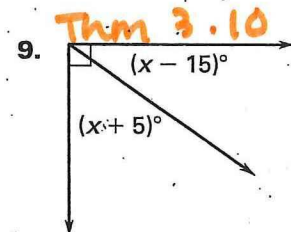
$$\boxed{x = 105}$$



$$3x + 6 = 90$$

$$3x = 84$$

$$\boxed{x = 28}$$



$$x + 5 + x - 15 = 90$$

$$2x - 10 = 90$$

$$2x = 100$$

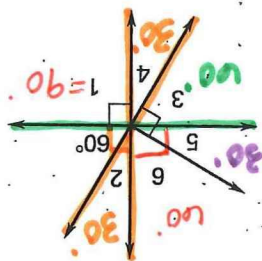
$$\boxed{x = 50}$$

Name \_\_\_\_\_

Date \_\_\_\_\_

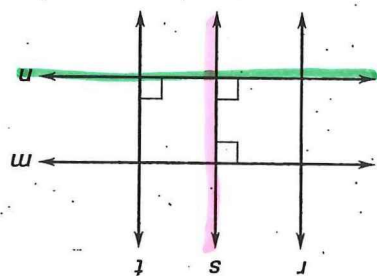
Find the measure of the indicated angle.

- 11.  $\angle 2 = 30^\circ$
- 12.  $\angle 3 = 60^\circ$
- 13.  $\angle 4 = 30^\circ$
- 14.  $\angle 5 = 30^\circ$
- 15.  $\angle 6 = 60^\circ$



In Exercises 16-18, use the diagram.

- 16. Is  $r \parallel s$ ? **NO**
- 17. Is  $m \parallel n$ ? **MTS and nTS, m/n**
- 18. Is  $s \parallel t$ ? **STn and tLn, s/t**



**T Transversal**

See below #20  $A(1,5) B(2,2)$

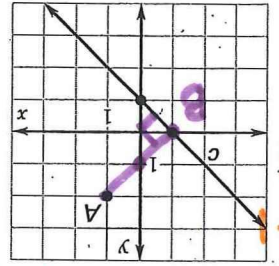
$$AB = \sqrt{(2-1)^2 + (2-5)^2} = \sqrt{1+9} = \sqrt{10}$$

$$AB = 3\sqrt{2}$$

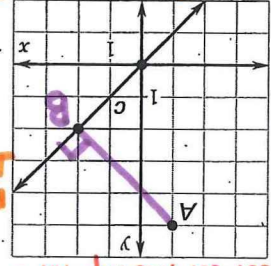
Use below #20  $A(x_1, y_1) B(x_2, y_2)$

Find the distance from point A to line c. Round your answers to the nearest tenth.

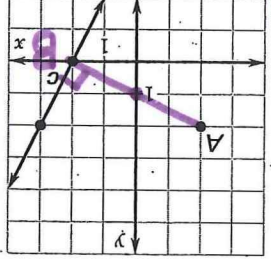
**Simplify**



19.  $m = -1$



20.  $m = 1$



21.  $m = 2$

- 1 Find the slope of line c and then find its opposite reciprocal (T)
- 2 Use the T slope from point A to line c.
- 3 Draw the segment.
- 4 Find the coordinates of your endpoints of your segment (AB)
- 5 Use the distance formula

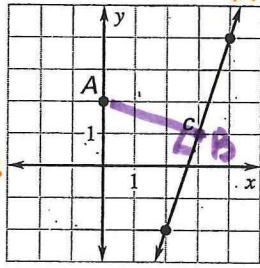
$AB = \sqrt{(-1+1)^2 + (0-2)^2} = \sqrt{0+4} = \sqrt{4} = 2$

$AB = 2\sqrt{2}$

$AB = \sqrt{(2+2)^2 + (0-2)^2} = \sqrt{16+4} = \sqrt{20} = 2\sqrt{5}$

**LESSON 3.6 Practice** *continued*  
For use with pages 190-197

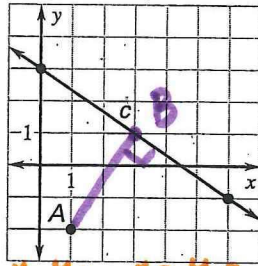
22.



$m = 3$   
 $\perp m = -\frac{1}{3}$   
 $x_1, y_1$   
 $A(0, 2)$   $x_2, y_2$   
 $B(3, 1)$

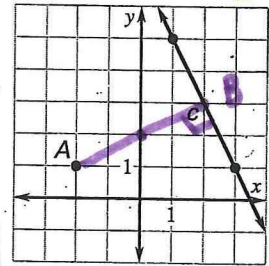
$AB = \sqrt{(3-0)^2 + (1-2)^2}$   
 $= \sqrt{(3)^2 + (-1)^2}$   
 $= \sqrt{9+1}$   
 **$AB = \sqrt{10}$**

23.



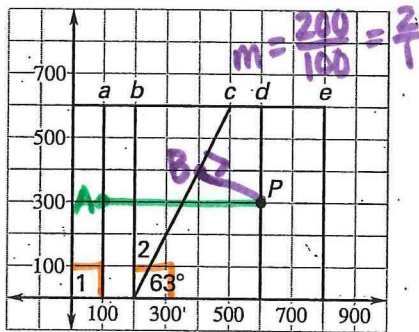
$m = -\frac{2}{3}$   
 $\perp m = \frac{3}{2}$   
 $x_1, y_1$   
 $A(1, -2)$   $x_2, y_2$   
 $B(3, 1)$   
 $AB = \sqrt{(3-1)^2 + (1-(-2))^2}$   
 $= \sqrt{(2)^2 + (3)^2}$   
 $= \sqrt{4+9}$   
 **$AB = \sqrt{13}$**

24.



$m = -2$   
 $\perp m = \frac{1}{2}$   
 $x_1, y_1$   
 $A(-2, 1)$   $x_2, y_2$   
 $B(2, 3)$   
 $AB = \sqrt{(2-(-2))^2 + (3-1)^2}$   
 $= \sqrt{(4)^2 + (2)^2}$   
 $= \sqrt{16+4}$   
 $= \sqrt{20}$   
 **$AB = 2\sqrt{5}$**

25. **Maps** A map of a neighborhood is drawn on a graph where units are measured in feet.



a. Find  $m\angle 1$ .

**$\angle 1 = 90^\circ$**

b. Find  $m\angle 2$ .

$= 90 - 63$   
 **$m\angle 2 = 27^\circ$**

c. Find the distance from point  $P$  to line  $a$ .

Horizontal line  $\rightarrow m = \text{undefined}$   
 $\perp m = 0$   
 $AP = |100 - 600|$   **$AP = 500 \text{ ft}$**

d. Find the distance from point  $P$  to line  $c$ . Round your answer to the nearest foot.

$\perp m = -\frac{1}{2}$   
 $x_1, y_1$   
 $P(600, 300)$   $x_2, y_2$   
 $B(400, 400)$   
 $m = 2$   
 $PB = \sqrt{(400-600)^2 + (400-300)^2}$   
 $= \sqrt{(-200)^2 + (100)^2}$   
 $= \sqrt{40000 + 10000}$   
 $= \sqrt{50000}$

simplify  
 $\sqrt{50,000}$   
 $= \sqrt{25,000 \cdot 2}$   
 $= \sqrt{12,500 \cdot 4}$   
 $= \sqrt{3,125 \cdot 16}$   
 $= 4\sqrt{3,125}$   
 $= 4\sqrt{625 \cdot 5}$   
 $= 4 \cdot 25 \sqrt{5}$   
 $= 100\sqrt{5}$   
 **$PB = 50\sqrt{5}$**