

LESSON
2.5
Practice B

For use with pages 104–111

Complete the logical argument by giving a reason for each step.

1. $5(2x - 1) = 9x + 2$
 $10x - 5 = 9x + 2$
 $10x = 9x + 7$
 $x = 7$

Given

a. ?

b. ?

c. ?

2. $8x - 5 = -2x - 15$
 $10x - 5 = -15$
 $10x = -10$
 $x = -1$

Given

a. ?

b. ?

c. ?

3. $AB = BC$
 $AC = AB + BC$
 $AC = AB + AB$
 $AC = 2(AB)$

Given

a. ?

b. ?

c. ?

4. $m\angle AEB = m\angle CED$
 $m\angle BEC = m\angle BEC$
 $m\angle AEB + m\angle BEC = m\angle CED + m\angle BEC$
 $m\angle AEC = m\angle AEB + m\angle BEC$
 $m\angle BED = m\angle CED + m\angle BEC$
 $m\angle AEC = m\angle BED$

Given

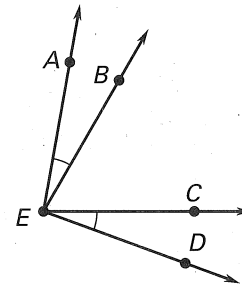
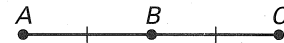
a. ?

b. ?

c. ?

d. ?

e. ?



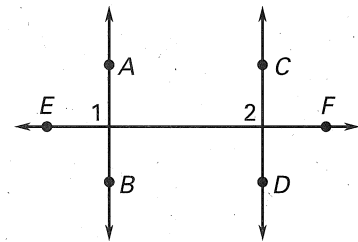
5. $\overleftrightarrow{AB} \perp \overleftrightarrow{EF}, \overleftrightarrow{CD} \perp \overleftrightarrow{EF}$
 $m\angle 1 = 90^\circ$
 $m\angle 2 = 90^\circ$
 $m\angle 1 = m\angle 2$

Given

a. ?

b. ?

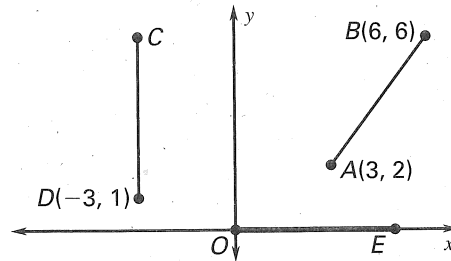
c. ?


Use the property to complete the statement.

- Reflexive Property of Angle Measure: $m\angle B = \underline{\quad? \quad}$.
- Transitive Property of Equality: If $CD = GH$ and $\underline{\quad? \quad} = RS$, then $\underline{\quad? \quad}$.
- Addition Property of Equality: If $x = 3$, then $14 + x = \underline{\quad? \quad}$.
- Symmetric Property of Equality: If $BC = RL$, then $\underline{\quad? \quad}$.
- Substitution Property of Equality: If $m\angle A = 45^\circ$, then $3(m\angle A) = \underline{\quad? \quad}$.
- Multiplication Property of Equality: If $m\angle A = 45^\circ$, then $\underline{\quad? \quad}(m\angle A) = 15^\circ$.

LESSON 2.5 **Practice B** *continued*
For use with pages 104–111

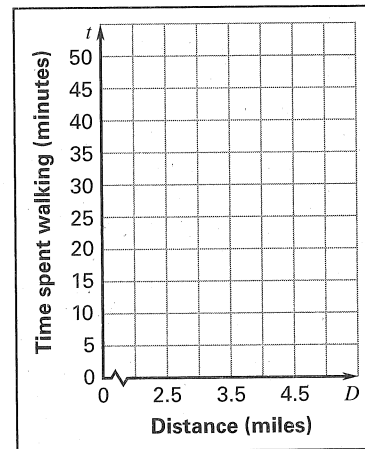
- 12. Distance** You are given the following information about the diagram at the right: $AB = CD$, $CD = OE$. Find the coordinates of points C and E . *Explain* your reasoning.



In Exercises 13–15, use the following information.

Treadmill Mark works out for 45 minutes on a treadmill. He spends t minutes walking and the rest of the time running. He walks 0.06 mi/min and runs 0.11 mi/min. The total distance (in miles) he travels is given by the function $D = 0.06t + 0.11(45 - t)$.

- 13.** Solve the formula for t and write a reason for each step.
- 14.** Make a table that shows the time spent walking for the following distances traveled: 2.7, 3, 3.7, 4.3, and 4.5.
- 15.** Use the table from Exercise 14 to graph the time spent walking as a function of the distance traveled. What happens to the time spent walking as distance increases?



In Exercises 16–18, use the following information.

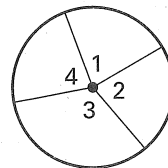
Statistics The students at a school vote for one of four candidates for class president. The circle graph below shows the results of the election. Each sector on the graph represents the percent of the total votes that each candidate received. You know the following about the circle graph.

$$m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4 = 360^\circ$$

$$m\angle 2 + m\angle 3 = 200^\circ$$

$$m\angle 1 = m\angle 4$$

$$m\angle 2 = m\angle 4$$



- 16.** Find the angle measure for each sector.
- 17.** What percent of the vote did each candidate receive?
- 18.** How many votes did each candidate receive if there were a total of 315 votes?