Name _____ Date _____

LESSON 2.5

Practice

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. ? Distribute

b. ? Addition

c. ? Subtraction

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

$10x - 5 = -15$

$10x = -10$

$x = -1$

Given

a. ? Addition

b. ? Addition

c. ? Division

3. $AB = BC$

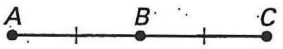
$AC = AB + BC$

$AC = AB + AB$

$AC = 2(AB)$

Segment Add. Post. (SAP)

Given



a. ? SAP

b. ? Substitution

c. ? Distributive

4.

$m\angle AEB = m\angle CED$

$m\angle BEC = m\angle BEC$

$m\angle AEB + m\angle BEC = m\angle CED + m\angle BEC$

$m\angle AEC = m\angle AEB + m\angle BEC$

$m\angle BED = m\angle CED + m\angle BEC$

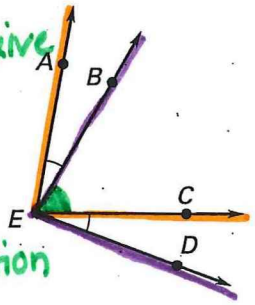
$m\angle AEC = m\angle BED$

Sub. Sub.

Angle Add. Post. (AAP)

∠ Add. Post.

Given



a. ? Reflexive

b. ? Add.

c. ? AAP

d. ? AAP

e. ? Substitution

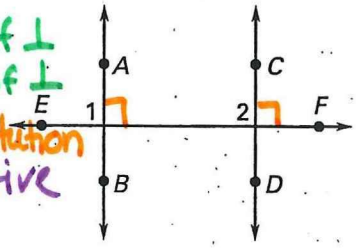
5. $\overleftrightarrow{AB} \perp \overleftrightarrow{EF}$, $\overleftrightarrow{CD} \perp \overleftrightarrow{EF}$

$m\angle 1 = 90°$

$m\angle 2 = 90°$

$m\angle 1 = m\angle 2$

Given



a. ? Def. of ⊥

b. ? Def. of ⊥

c. ? Substitution Transitive

$m\angle 1 = 90$ and $m\angle 2 = 90$

$\therefore m\angle 1 = m\angle 2$

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

Use the property to complete the statement.

6. Reflexive Property of Angle Measure: $m\angle B =$? . $m\angle B$

7. Transitive Property of Equality: If $CD = GH$ and GH $= RS$, then ? . $CD = RS$.

8. Addition Property of Equality: If $x = 3$, then $14 + x =$? . $14 + 3 = 17$

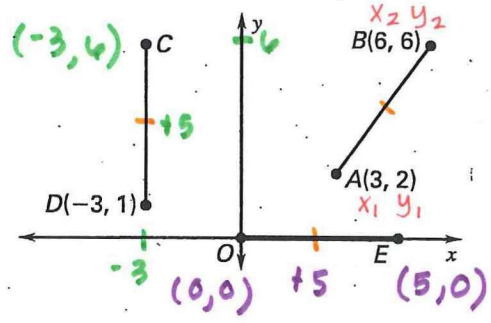
9. Symmetric Property of Equality: If $BC = RL$, then ? . $RL = BC$

10. Substitution Property of Equality: If $m\angle A = 45°$, then $3(m\angle A) =$? . $3(45)$ $135°$.

11. Multiplication Property of Equality: If $m\angle A = 45°$, then $\frac{1}{3}$ $(m\angle A) = 15°$.

$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

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.



$C(-3, 6)$ $E(5, 0)$

$AB = \sqrt{(6-3)^2 + (6-2)^2}$
$= \sqrt{(3)^2 + (4)^2}$
$= \sqrt{9+16}$
$= \sqrt{25}$
$AB = 5$