

Name \_\_\_\_\_

Date \_\_\_\_\_

## Assignment 12 LESSON 2.5

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

1.  $8x - 34 = 6$  Given

$8x = 40$  a.   ?  

$x = 5$  b.   ?  

2.  $4x - 7 = 6x + 7$  Given

$-2x - 7 = 7$  a.   ?  

$-2x = 14$  b.   ?  

$x = -7$  c.   ?  

3.  $5(x - 3) = 4(x + 2)$  Given

$5x - 15 = 4x + 8$  a.   ?  

$x - 15 = 8$  b.   ?  

$x = 23$  c.   ?  

4.  $x = \frac{1}{7}y - 9$  Given

$x + 9 = \frac{1}{7}y$  a.   ?  

$7x + 63 = y$  b.   ?  

$y = 7x + 63$  c.   ?  

Solve the equation. Write a reason for each step.

5.  $x + 18 = 7$

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6.  $5x = 4x + 8$

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7.  $6x + 11 = 5x - 3$

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8.  $4(2x + 11) = 76$

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9.  $14(x + 1) = -7(4 + x)$

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**Use the property to complete the statement.**

- 10. Addition Property of Equality: if  $RS = TU$ , then  $RS + 20 = \underline{\quad? \quad}$ .
- 11. Multiplication Property of Equality: If  $m\angle 1 = m\angle 2$ , then  $3m\angle 1 = \underline{\quad? \quad}$ .
- 12. Substitution Property of Equality: If  $a = 20$ , then  $5a = \underline{\quad? \quad}$ .
- 13. Reflexive Property of Equality: If  $x$  is a real number, then  $x = \underline{\quad? \quad}$ .
- 14. Symmetric Property of Equality: If  $AB = CD$ , then  $CD = \underline{\quad? \quad}$ .
- 15. Transitive Property of Equality: If  $m\angle E = m\angle F$  and  $m\angle F = m\angle G$ , then  $\underline{\quad? \quad}$ .