UNIT 2 • REASONING WITH LINEAR EQUATIONS AND INEQUALITIES
Lesson 4: Solving Equations and Inequalities

Practice 2.4.1: Properties of Equality   A

Identify the property of equality that justifies each missing step or equation in each of the following tables.

1.

Equation	Steps
$x - 1.2 = 1.9$	Original equation
$x = 3.1$	

2.

Equation	Steps
$5x = 37$	Original equation
$x = 7.4$	

3.

Equation	Steps
$2x + 3 = 15$	Original equation
$2x = 12$	Subtraction property of equality
$x = 6$	

4.

Equation	Steps
$19 = 2x - 7$	Original equation
$26 = 2x$	
$13 = x$	Division property of equality
$x = 13$	Symmetric property of equality

5.

Equation	Steps
$x + (x - 0.6) = 2$	Original equation
$2x - 0.6 = 2$	Associative property of addition
	Addition property of equality
$x = 1.3$	

continued

6.

Equation	Steps
$x + (4x + 32) = 12$	Original equation
$5x + 32 = 12$	Associative property of addition
$5x = -20$	
	Division property of equality

7.

Equation	Steps
$4(x - 6) = 40$	Original equation
$x - 6 = 10$	
$x = 16$	

8.

Equation	Steps
$1.4 - 0.3x + 0.7x = 9.4$	Original equation
$1.4 + 0.4x = 9.4$	
$0.4x = 8$	
$x = 20$	

Solve each equation that follows. Justify each step in your process using the properties of equality. Be sure to include the properties of operations, if used.

9. $7x - (4x - 39) = 0$

10. $4(3x + 5) = -4$