

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Score: \_\_\_\_\_

## Sec 1

## Unit 1 Review

## Unit 1

**Simplify.**

1.  $8 - 2 \cdot 5 - 3 + 5 \cdot 4$

5.  $5^3 - (-8) - 12(-2)$

2.  $2 - 3 \cdot 6$

6.  $15 - 6 \div 2$

3.  $44 \div 11 + 5 \cdot 7 - 5^2$

7.  $\frac{-23 - (-15)}{(-18 + 7) - (-5)}$

4.  $4 \cdot 9 - 8 + 3$

8.  $\frac{(-2)^2 - 3^2}{8 - 3(2)}$

**Simplify.**

9.  $4x - 5 + 7x + 2x - x + 3$

13.  $(x - 7)(x + 3)$

10.  $-(8x + 3) + 12x$

14.  $2x + 5 - 3x - 4x + 2$

11.  $4(-6x + 7y) + 10$

15.  $3(4x - 3) + 2x$

12.  $(x + 5)(x + 2)$

16.  $6x - 1 + 5x + 8$

**Simplify.**

$$17. -9(x - 7)$$

$$18. (a + 7)^2$$

**Solve for y.**

$$19. 2x + 3y = 9$$

$$23. 2y - 3x = y + 7$$

$$20. 4x - 8y = 12$$

$$24. 3x - \frac{y}{5} = -8$$

$$21. x - y = 5$$

$$25. 7y - 4 = -2y + x$$

$$22. 4x - y = 3$$

$$26. \frac{2x}{4} - 5y = -2$$

**Solve using inverse operations. Be sure to JUSTIFY your steps using Properties of Equality.**

27.  $-5h = 35$  | Justification

30.  $-18 = x - 5$  | Justification

28.  $26 - m = 11$  | Justification

31.  $15d - 6 = 18 + 7d$  | Justification

29.  $4(5x - 6) > -24$  | Justification

32.  $\frac{k}{5} \leq 11$  | Justification

**Solve using inverse operations.**

33.  $-3(2x - 9) = 2 - 5(3x + 7)$

34.  $12x - 16x = 27$

**Solve using inverse operations.**

35.  $2(15x - 10) - 4(16x + 10) = 8$

38.  $4(z - 3) + 3(2z + 5) < -7$

36.  $5(2x + 3) + 6x = -17$

39.  $-9t + 4(t - 2) \leq t - (6 + 5t) + 9$

37.  $20 - 5x \geq 17 - 2x$

40.  $\frac{3}{5}m + 2 > \frac{1}{3}m$

41. Jan noticed at the store that a sweater costs \$3.95 more than a shirt. She bought 3 shirts and 2 sweaters and the total cost (before tax) was \$71.65. What is the price of a sweater? What is the price of a shirt?

42. Luigi purchased three pairs of shoes and two pairs of boots for \$130. If a pair of boots is five dollars less than the price of shoes, determine the price of a pair of boots.

**Solve for  $c$ .**

$$43. \ cx + by = d$$

$$44. \ \frac{1}{3}ct = p$$

**Solve for  $m$ .**

$$45. \ hm + y = w$$

$$46. \ u(m + e) = v$$