Math 084 W2010 Worksheet 2.2 v01b
Dressler

Name_____

Solve the equation using the multiplication property of equality.

1) $\frac{1}{21}a = 0$

2) $\frac{n}{2} = 8$

3) $-\frac{n}{5} = -3$

4) $\frac{v}{-4} = 13$

5) $7x = 42$

6) $-8x = 0$

7) $-6a = 30$

8) $-3x = -21$

9) $-36x = 16$

10) $-\frac{1}{5}x = 8$

11) $18 = -\frac{6}{7}x$

12) $\frac{7}{8}x = 21$

13) $\frac{2}{5}x = -\frac{5}{7}$

14) $2x + x = 27$

15) $-8x + x = -35$

Solve the equation.

16) $-y = -5$

17) $-y = -6$

18) $-z = -7$

19) $-x = 11$

20) $-x = 4$

21) $-x = 10$

22) $-x = -11$

23) $-x = 7$

24) $-x = -8$

Solve the equation using both the addition and multiplication properties of equality.

25) $3r + 8 = 29$

26) $4n - 7 = 25$

27) $58 = -7x - 5$

28) $-37 = 9x + 8$

29) $-3x - 22 = -58$

30) $-10 = -3x + 2$

31) $-4x = -18 + 5x$

32) $7y - 9 = 4y$

33) $-6y + 28 = -2y$

34) $18x - 2 = 8x + 88$

35) $5y - 1 = -5 - 7y$

36) $10x - 4 = 72 - 9x$

37) $-7x + 5x + 8 = -5x$

38) $7r + 7 = 21$

Use the given information to write an equation. Let x represent the number described in the exercise. Then solve the equation and find the number.

39) The product of three–fourths and a number is six.

40) If thirty is divided by a number, the result is five.

41) A number subtracted from eighteen is four.

Solve the problem.

42) The time it takes to travel a given distance at constant speed is given by the formula $t = \frac{d}{r}$, where t is the time, d is the distance, and r is the rate of travel. At 60 miles per hour, what distance can be traveled in 3 hours?

43) The time it takes to travel a given distance at constant speed is given by the formula $t = \frac{d}{r}$, where t is the time, d is the distance, and r is the rate of travel. At 30 miles per hour, what distance can be traveled in 5 hours?

44) The time it takes to travel a given distance at constant speed is given by the formula $t = \frac{d}{r}$, where t is the time, d is the distance, and r is the rate of travel. At 0.2 mile per minute, what distance can be traveled in 50 minutes?

45) The time it takes to travel a given distance at constant speed is given by the formula $t = \frac{d}{r}$, where t is the time, d is the distance, and r is the rate of travel. At 0.6 mile per minute, what distance can be traveled in 30 minutes?

46) To convert meters to feet, you can use the formula $f = \frac{m}{0.3038}$, where f is the distance in feet and m is the distance in meters. How many meters (to the nearest tenth) is 23 feet?

47) To convert meters to feet, you can use the formula $f = \frac{m}{0.3038}$, where f is the distance in feet and m is the distance in meters. How many meters (to the nearest tenth) is 16 feet?

48) Power is the time rate of doing work and is commonly measured in watts. Power is given by the formula $P = \frac{W}{t}$, where P is power, W is work (in joules), and t is time in seconds. If 300 watts of power are used in 6 seconds, how much work (in joules) was done?

49) Power is the time rate of doing work and is commonly measured in watts. Power is given by the formula $P = \frac{W}{t}$, where P is power, W is work (in joules), and t is time in seconds. If 1000 watts of power are used in 2 seconds, how much work (in joules) was done?

50) The speed of a ball dropped from a tower is given by the formula f = 32t where f is in feet per second and t is the number of seconds since the ball was dropped. Find the speed of the ball after 2 seconds.

51) The speed of a ball dropped from a tower is given by the formula f = 32t where f is in feet per second and t is the number of seconds since the ball was dropped. Find the speed of the ball after 8 seconds.

52) The formula C = 520x + 119 models the data for the cost to produce x units of a product, where C is given in dollars. How many units can be produced for a cost of $260,119?

53) The formula C = 587x + 137 models the data for the cost to produce x units of a product, where C is given in dollars. How many units can be produced for a cost of $293,637?

54) The weekly production cost C of manufacturing x calendars is given by C = 30 + 5x, where the variable C is in dollars. What is the cost of producing 231 calendars?

55) The weekly production cost C of manufacturing x calendars is given by C = 25 + 3x, where the variable C is in dollars. What is the cost of producing 228 calendars?

1) {0}
2) {16}
3) {15}
4) {–52}
5) {6}
6) {0}
7) {–5}
8) {7}
9) $\left\{-\frac{4}{9}\right\}$
10) {–40}
11) {– 21}
12) {24}
13) $\left\{-\frac{25}{14}\right\}$
14) {9}
15) {5}
16) {5}
17) {6}
18) {7}
19) {–11}
20) {–4}
21) {–10}
22) {11}
23) {–7}
24) {8}
25) {7}
26) {8}
27) {–9}
28) {–5}
29) {12}
30) {4}
31) {2}
32) {3}
33) {7}
34) {9}
35) $\left\{-\frac{1}{3}\right\}$
36) {4}
37) $\left\{-\frac{8}{3}\right\}$
38) {2}
39) $\frac{3}{4}x = 6$; 8
40) $\frac{30}{x} = 5$; 6
41) 18 – x = 4; 14
42) 180 mi

43) 150 mi
44) 10 mi
45) 18 mi
46) 7.0 m
47) 4.9 m
48) 1800 joules
49) 2000 joules
50) 64 ft/sec
51) 256 ft/sec
52) 500 units
53) 500 units
54) $1185.00
55) $709.00