Math 084 W2010 Worksheet 1.8 v01a
Dressler

Name_____

Solve the equation using the multiplication property of equality.

1) $-\frac{1}{3}a = 0$

2) $\frac{n}{4} = 6$

3) $-\frac{n}{2} = -12$

4) $\frac{v}{-3} = 6$

5) $5x = 45$

6) $5x = 0$

7) $9a = -36$

8) $-5x = -35$

9) $-49x = 21$

10) $-\frac{1}{3}x = 6$

11) $16 = -\frac{4}{5}x$

12) $\frac{2}{3}x = 10$

13) $-\frac{2}{3}y = \frac{1}{5}$

14) $6x + x = 28$

15) $-4x + x = -27$

Solve the equation.

16) $-x = -5$

17) $-y = 15$

18) $-z = -15$

19) $-x = 10$

20) $-x = -6$

21) $-z = -9$

22) $-x = 14$

23) $-x = -2$

24) $-x = -7$

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

25) $4r + 7 = 47$

26) $10n - 10 = 90$

27) $-16 = 8x - 8$

28) $76 = -9x - 5$

29) $-5x - 19 = -74$

30) $-44 = -5x + 6$

31) $-5x = 36 + 7x$

32) $8y + 6 = 6y$

33) $-8y - 36 = -2y$

34) $16x - 6 = 4x + 90$

35) $-3y + 2 = -2 + 6y$

36) $9x - 2 = 22 - 3x$

37) $-7x - 5x - 6 = 2x$

38) $5r + 6 = 21$

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 50 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 6 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 0.5 mile per minute, what distance can be traveled in 30 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 0.5 mile per minute, what distance can be traveled in 50 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 8 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 9 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 700 watts of power are used in 4 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 400 watts of power are used in 22 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 11 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 9 seconds.

52) The formula C = 522x + 133 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 $104,533?

53) The formula C = 590x + 130 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 $354,130?

54) 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 279 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 235 calendars?

1) {0}
2) {24}
3) {24}
4) {–18}
5) {9}
6) {0}
7) {–4}
8) {7}
9) $\left\{-\frac{3}{7}\right\}$
10) {–18}
11) {– 20}
12) {15}
13) $\left\{-\frac{3}{10}\right\}$
14) {4}
15) {9}
16) {5}
17) {–15}
18) {15}
19) {–10}
20) {6}
21) {9}
22) {–14}
23) {2}
24) {7}
25) {10}
26) {10}
27) {–1}
28) {–9}
29) {11}
30) {10}
31) {–3}
32) {–3}
33) {–6}
34) {8}
35) $\left\{\frac{4}{9}\right\}$
36) {2}
37) $\left\{-\frac{3}{7}\right\}$
38) {3}
39) $\frac{3}{4}x = 6$; 8
40) $\frac{30}{x} = 5$; 6
41) 18 – x = 4; 14
42) 150 mi

43) 180 mi
44) 15 mi
45) 25 mi
46) 2.4 m
47) 2.7 m
48) 2800 joules
49) 8800 joules
50) 352 ft/sec
51) 288 ft/sec
52) 200 units
53) 600 units
54) $862.00
55) $730.00