Chapter 2 Review

Name: Answer Key

Solve each equation. Show your work!!

1.
$$x - 20 = -30$$
+20 +20

$$2\frac{3}{3} \cdot \frac{2}{3} w = 24 \cdot \frac{3}{2}$$

$$W = 36$$

3.
$$17 = 12 - 2d$$

$$-12 - 12$$

$$5 = -2d$$

$$-2 - 2d$$

$$-2 - 3d$$

$$-3d$$

-26=69-3-59

4.
$$2x-3-4x = 37$$

$$-2x-3 = 37$$

$$+3 +3$$

$$-2x = 40$$

$$-3 = -30$$
7. $-10 = \frac{1}{3}(12f - 24)$

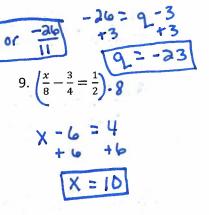
$$-10 = 4f - 8$$

$$+8$$

$$-3 = 4f$$

$$4$$

5.
$$12n + 4 = -10n - 48$$
 $+10n$
 $+10n$
 $22n + 4 = -48$
 $22n = -52$
 23
 23
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10.
$$-2g + 5 = 12 - g$$

+2g
$$5 = 12 + 1g$$

$$-12 - 12$$

$$9 = -7$$

12. 2(4a + 8) = 4(4 + 2a)

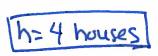
all real #5
or
many solutions

Write and solve an equation that represents each situation.

13. Bob earns \$800 per month for painting houses. He also receives \$300 for each house he paints. If he wants to earn \$2000 each month, how many houses does he need to paint?

11. 2x + 2 = 2(x + 1)

-800 + 300h = 2000 4 -800 -800



14. Billy is looking to join a gym. Gym A charges \$3 per workout. Gym B charges a \$15 enrollment fee & \$1 per workout. What is the minimum number of workouts that Billy needs in order for Gym B to be the better deal? W = workout 5

-W = 15+1W + 2W=15 2 2 2 2 W=7.5 After 8'workouts gym B will be the better deal.

Solve each equation for y. Then evaluate for the given x-values.

15.
$$\frac{1}{2}y - 3x = 6$$
 evaluate for: $x = -2, 0, 5$

$$2 \cdot \frac{1}{2}y = (3x + 6)2$$

$$y = 6x + 10$$

$$x \cdot y = 6x + 10$$

Solve each equation for x.

17.
$$\frac{1}{2}x - z = y$$

 $+z$ $+z$
 $2 \cdot \frac{1}{2}x = (y+z)$ $= 2y + 2z$

Convert. Show your work!!

17.
$$\frac{1}{2}x - z = y$$

 $\frac{1}{2}x - z = y$
 $\frac{1}{2}x - z = y$

20. Tony ran 3 km 15 minutes. What was his average speed in miles per hour?

21. Which is the better buy, 2 shirts for \$35 or 7 shirts for \$90? Explain.

Solve. Show your work!!

22.
$$\frac{5}{2.6} = \frac{15}{x}$$

$$5x = \frac{39}{5}$$

$$x = 7.8$$

24. What percent of 8 is 12?

$$\frac{X \cdot 8 = 13}{8} \times = 1.5$$
 [150%]

23. $\frac{3h+4}{10} = \frac{5}{2}$

$$2(3h+4) = 50$$
 $6h+8=50$

16. 5y + 2x = 7 evaluate for: x = -1, 0, 2

5y=-2x+7 -1

y = -2x+7

18. ax + bx + c = d

25. What is 25% of 425?

26. Forty-seven students, out of 100 surveyed, chose basketball as their favorite sport. If the school has 2700 students, how many students would likely say that basketball is their favorite sport?

$$\frac{47}{100} = \frac{\times}{2700}$$
 $\frac{100 \times = 126900}{100} \times = 1269 \text{ students}$

27. Tommy opened a savings account with a simple interest rate of 5.5%. He initially deposited \$600. If he doesn't deposit any more, how much will be in his account after 10 years?

28. The opening bid for a painting at auction is \$2000. If the painting actually sells for \$5000, what is the percent of increase to the nearest percent?

29. You estimate your teacher is 35 years old. He is actually 42. What is the percent error?