

**Math 1 Chapter 3 Review Packet****Solve the equation.**

1.  $\frac{5}{x} = \frac{8}{15}$

2.  $\frac{4}{x+3} = \frac{8}{12-x}$

3.  $-16 = 9 + x$

4.  $17x = 85$

5.  $-16x = 48$

6.  $35a = -70$

7.  $\frac{b}{2} = 14$

8.  $\frac{1}{4}x - 5 = 27$

9.  $14x + 3x - 40 = -11$

10.  $40 - 14y = 6y$

11.  $3x - 8 = -3x + 4$

12.  $12(y - 3) = 15y$

13. Simple Interest Formula:  $P = Irt$   
Solve for  $t$ .

14. Pressure (in pounds per square foot) on a diver at a depth of  $d$  feet:  $P = 64d + 2112$   
Solve for  $d$ .

15. Volume of a Cone:  $V = \frac{\pi r^2 h}{3}$

Solve for  $h$ .

16. 18 is what percent of 60?

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17. What distance is 24% of 710 miles?

18. 2% of what amount is \$200?

19. 85% of 300 is what number?

$$20. \frac{3}{8} = \frac{x}{12}$$

$$21. \frac{3}{x+2} = \frac{9}{4x-1}$$

$$22. \frac{5}{3-4x} = \frac{40}{x+6x}$$

$$23. 14 = x - (-7)$$

$$24. 3 - (-x) = 19$$

$$25. \frac{4}{5}x = 50$$

$$26. \frac{2}{3}y = -48$$

$$27. \frac{3}{8}y = 12$$

$$28. -\frac{5}{7}t = -25$$

$$29. 12x - (4x + 10) = 54$$

$$30. 8x - 10(3 - x) = 42$$

$$31. \frac{2}{3}(x + 4) = 8$$

$$32. 6(x - 9) = -12(x - 3)$$

**Rewrite the equation so that  $y$  is a function of  $x$ .**

$$33. 7x + y = 13$$

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34.  $3x + 5y = 15$

35.  $\frac{2}{3}y + 4 = 2x$

36. The total bill (parts and labor) for the repair of a car was \$458. The cost of parts was \$339. The cost of labor was \$34 per hour. Write and solve an equation to find the number of hours of labor.

37. A local gym charges nonmembers \$8 per day to use the volleyball courts. Members pay a yearly fee of \$150 and \$2 per day to use the volleyball courts. Write and solve an equation to find how many days you must use the volleyball courts to justify becoming a member.

38. A waiter typically receives about 15% of a food bill as a tip. To earn a total of \$50 in tips, about how much must the total of all food bills be?

39. A customer left a tip of \$1.75 for a \$12.50 meal. What percent of the bill was the waiter's tip?