

Name

ANSWERS

Pre-Algebra

Chapter 3 & 4 Practice Test

Solve the equations. Show all the steps.

1. $m - 6 = -4$

$$\begin{array}{r} +6 \quad +6 \\ m = 2 \end{array}$$

2. $-5 + x = 32$

$$\begin{array}{r} +5 \quad +5 \\ x = 37 \end{array}$$

3. $\frac{3y}{3} = \frac{63}{3}$

$$y = 21$$

4. $\frac{4w}{4} = 12 \cdot 4$

$$w = 48$$

5. $4b + 3 = 67$

$$\begin{array}{r} -3 \quad -3 \\ 4b = 64 \\ \frac{4b}{4} = \frac{64}{4} \\ b = 16 \end{array}$$

6. $-3n + 11 = 47$

$$\begin{array}{r} -11 \quad -11 \\ -3n = 36 \\ \frac{-3n}{-3} = \frac{36}{-3} \\ n = -12 \end{array}$$

7. $\frac{x}{2} - 7 = 18$

$$\begin{array}{r} +7 \quad +7 \\ 2 \cdot \frac{x}{2} = 25 \cdot 2 \\ x = 50 \end{array}$$

8. $15 = \frac{h+5}{4} \cdot 4$

$$\begin{array}{r} 60 = h + 5 \\ -5 \quad -5 \\ 55 = h \end{array}$$

9. $36 = 5g - 8g$

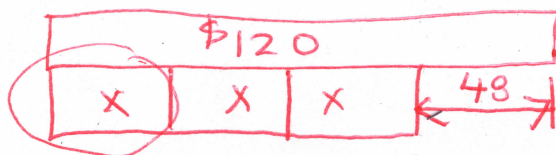
$$\begin{array}{r} 36 = -3g \\ \frac{36}{-3} = \frac{-3g}{-3} \\ -12 = g \end{array}$$

10. $8x - 2x - 1 = 143$

$$\begin{array}{r} 6x - 1 = 143 \\ +1 \quad +1 \\ 6x = 144 \\ \frac{6x}{6} = \frac{144}{6} \\ x = 24 \end{array}$$

Solve each word problem.

11. You earn \$120 per month. You spend \$48 at Spring Loaded. One-third of the money you have left goes into savings. How much do you save each month?

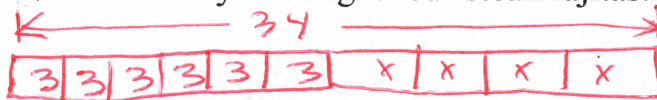
 $x = \text{Savings}$

$$\begin{array}{r} 120 = 3x + 48 \\ -48 \quad -48 \end{array}$$

$$\begin{array}{r} 72 = 3x \\ \frac{72}{3} = \frac{3x}{3} \end{array}$$

$$24 = x$$

12. You go to Taco Cabana and buy fajitas and burritos. Your total is \$34. You bought six burritos for \$3 each and you bought four steak fajitas. How much does a steak fajita cost?



$$6(3) + 4x = 34$$

$$18 + 4x = 34$$

$$4x = 16$$

$$x = 4$$

Translate each sentence into an equation. Solve the equation.

1. The difference between a number and 8 is 91.

$$x - 8 = 91$$

$$+ 8 \quad + 8$$

$$x = 99$$

2. The product of 16 and a number is 112.

$$16 \cdot x = 112$$

$$\frac{16x = 112}{16 \quad 16}$$

3. Seven less than a number is 10.

$$x - 7 = 10$$

$$+ 7 \quad + 7$$

$$x = 17$$

4. The quotient of a number and 9 is 216.

$$\frac{x}{9} = 216$$

$$x = 1944$$

5. Three more than twice a number is 85.

$$3 + 2x = 85$$

$$\rightarrow$$

$$2x = 82$$

$$x = 41$$

Answer Yes or No.

6. Is -4 a real number? Y

7. Is $\frac{1}{2}$ an integer? N

8. Is 0 a whole number? Y

9. Is -7 a rational number? Y

10. Is $\frac{3}{4}$ an irrational number? N

11. Is π a real number? Y

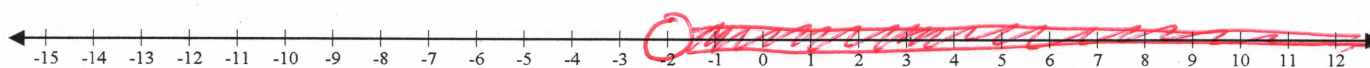
12. Is $\frac{9}{4}$ a whole number? N

13. Is 0 an integer? Y

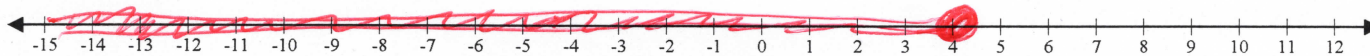
14. Is -8 a rational number? Y

Graph the inequalities.

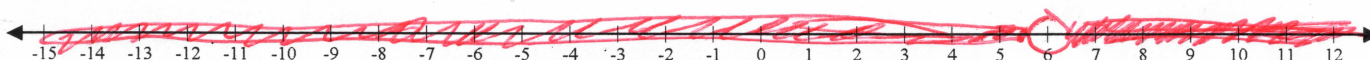
15. $x > -2$



16. $x \leq 4$



17. $x \neq 6$



Solve the inequalities.

18. $x - 5 \leq 11$

$+5 \quad +5$
 $x \leq 16$

19. $-8 < \frac{x}{-3}$

$-24 > x$

20. $2x - 6 > 30$

$+6 \quad +6$
 $\frac{2x}{2} > \frac{36}{2}$

$x > 18$