

Directions: When working each of the following questions, be sure to show all work. Be sure to round any decimals to the nearest hundredth.

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1) Represent the statement as an equation. Four less than one-third a number is 16.

a)  $4n - \frac{1}{3} = 16$

b)  $\frac{1}{3} - 4n = 16$

c)  $4n - \frac{1}{3} = 16$

d)  $\frac{1}{3}n - 4 = 16$

2) Represent the statement as an equation. The sum of three-fourths a number and 4 is -62.

a)  $\frac{3}{4}n + 4 = -62$

b)  $\frac{3}{4} + 4n = -62$

c)  $\frac{3}{4} + n + 4 = -62$

d)  $(4)\left(\frac{3}{4}\right) + n = -62$

3) Represent the statement as an equation. 6 pies more than three times the amount Scott baked yesterday is 27.

a)  $6 + 3x - 1 = 27$

b)  $6 + 3x = 27$

c)  $(6)(3x) - 1 = 27$

d)  $(6)(3x) = 27$

4) Solve  $12 + \frac{3}{4}n = -15$

5) Solve  $-0.8w + 6 = -1.2$

6) Solve  $\frac{x}{5} - 9 = -3$

7) Solve  $-7 - 4w = 13$

8) Solve  $\frac{2}{5}z - 11 = -3$

9) Solve  $6x - 7 = 17$

10) Solve  $8 = \frac{16+z}{14}$

11) Solve  $-6(p + 3) = -54$

12) Solve the inequality  $15x < 40x + 50$

a)  $x > -2$

b)  $x < -2$

c)  $x > 2$

d)  $x < 2$

13) Solve the inequality  $2x + 14 \leq -22 + 6x$

a)  $x \geq 9$

b)  $x \geq -9$

c)  $x \leq 9$

d)  $x \leq -9$

14) Identify  $y$

$$y = 4x - 12$$

$$y = -3x + 2$$

15) Identify  $x$  and  $y$

$$y = -2x - 36$$

$$y = -4x$$

a)  $y = 18, x = 72$

b)  $x = 18, y = -72$

c)  $y = -18, x = -72$

d)  $x = -18, y = -72$