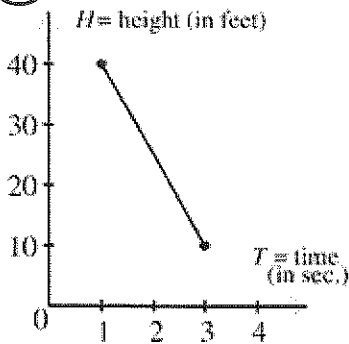


# - PRACTICE TEST -

15. The pet store has dog bones that sell for \$3.75 a pound and pig ears that sell for \$2.50 a pound. Write an equation that represents how much of each type of dog treat can be bought with \$42.

16. What is the domain and what is the range of the function in the graph?



Domain:  $1 \leq x \leq 3$       Range:  $10 \leq y \leq 40$

OR  $1 \leq T \leq 3$        $10 \leq H \leq 40$

17. The amount of money in Amy's college fund can be modeled by the equation  $y = 5000 + 1500x$  where  $x =$  her age in years.

a. What is the slope of the line for this equation?

Describe what the slope represents.

b. What is the y-intercept of the line for this equation?

Describe what the y-intercept represents.

18. The table shows the population  $p$  (in millions) of Florida over a four year span.

Year	2000	2001	2002	2003
Population (in millions)	15.6	16.0	16.3	16.6

a. Approximate the best-fitting line for the data.

b. Using this model, what will be the population in 2010?

19. Given  $f(x) = -5x - 9$ . Evaluate:

a.  $f(5)$

$$f(5) = -5(5) - 9$$

$$= -25 - 9$$

$$= -34$$

$$f(5) = \underline{-34}$$

b.  $f(-6)$

$$f(-6) = -5(-6) - 9$$

$$= 30 - 9$$

$$= 21$$

$$f(-6) = \underline{21}$$

c.  $f(0)$

$$f(0) = -5(0) - 9$$

$$= 0 - 9$$

$$= -9$$

$$f(0) = \underline{-9}$$

20. Find the slope and y-intercept of the graph of  $4x + 3y = 24$ .

Solve for  $y$  to put in slope-intercept form:

$$4x + 3y = 24$$

$$\begin{array}{r} -4x \\ \hline 3y = -4x + 24 \end{array}$$

$$3y = -4x + 24$$

$$\frac{3y}{3} = \frac{-4x + 24}{3}$$

$$y = \frac{-4}{3}x + 8$$

slope =  $-\frac{4}{3}$   
y-int = 8

21. The amount a spring will stretch,  $S$ , varies directly with the force (or weight),  $F$ , attached to the spring. If a spring stretches 3 inches with 35 pounds attached, how far will it stretch with 85 pounds attached?

Find  $a$ :

$$S = aF$$

$$3 = a(35)$$

$$\frac{3}{35} = a$$

Write equation:

$$S = \frac{3}{35}F \quad F = 85$$

$$S = \frac{3}{35}(85)$$

$$\text{use equation: } \approx 7.3 \text{ inches}$$

22. The variables  $x$  and  $y$  vary directly and  $y = -20$  when  $x = \frac{1}{4}$ . Write an equation that relates the variables.

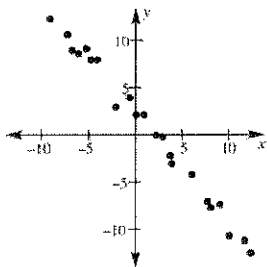
$$y = ax$$

$$-20 = a\left(\frac{1}{4}\right)$$

$$-80 = a$$

$$y = -80x$$

23. For the scatter plot shown, state whether  $x$  and  $y$  have a *positive correlation*, a *negative correlation*, or *no correlation*.



Negative correlation.