

Algebra 1 Ch. 3 Review

Review Ch. 3 (test is Wed.)

Whiteboards

24.  $-4x - 28 = 0$

25.  $25x - 225 = 0$

Find the zero (solve)

26. **FUNDRAISING** Sean's class is selling boxes of popcorn to raise money for a class trip. Sean's class paid \$85 for the popcorn, and they are selling each box for \$1. The function  $y = x - 85$  represents their profit  $y$  for each box of popcorn sold  $x$ . Find the zero and describe what it means in this situation.

$$\begin{aligned} y &= x - 85 \\ 0 &= x - 85 \\ +85 &\quad +85 \\ x &= 85 \end{aligned}$$

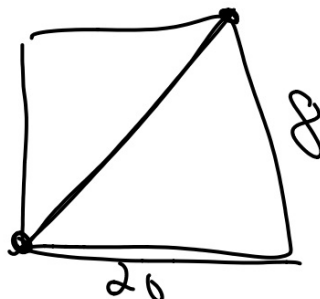
$$\begin{aligned} -4x - 28 &= 0 \\ +28 &\quad +28 \\ \hline -4x &= 28 \\ \frac{-4x}{-4} &= \frac{28}{-4} \quad x = -7 \end{aligned}$$

$$\begin{aligned} 25x - 225 &= 0 \\ +225 &\quad +225 \\ \hline 25x &= 225 \\ \frac{25x}{25} &= \frac{225}{25} \quad x = 9 \end{aligned}$$

31. **PHOTOS** The average cost of online photos decreased from \$0.50 per print to \$0.15 per print between 2002 and 2009. Find the average rate of change in the cost. Explain what it means.

$$\begin{array}{l} 2002 \quad .50 \\ 2009 \quad .15 \end{array}$$

$$\frac{-.35}{7} \quad \text{\$.05 per year}$$



$$\frac{8}{20} = \frac{2}{5}$$

$$y = kx$$

Suppose  $y$  varies directly as  $x$ . Write a direct variation equation that relates  $x$  and  $y$ . Then solve.

35. If  $y = 15$  when  $x = 2$ , find  $y$  when  $x = 8$ .

$$\frac{15}{2} = \frac{k \cdot 2}{2}$$

$$7.5 = k$$

$$\begin{aligned} y &= 7.5x \\ &= 7.5(8) \\ &= 60 \end{aligned}$$

38. **JOBS** Suppose you earn \$127 for working 20 hours.

a. Write a direct variation equation relating your earnings to the number of hours worked.

b. How much would you earn for working 35 hours?

$$y = kx$$

$$127 = 20 \cdot k$$

$$6.35 = k$$

$$y = 6.35x$$

$$y = 6.35(35)$$

→ \$222.25

42. 28, 25, 22, 19, ..16 13 10

$$a_n = 28 + (n-1)(-3)$$

