

**SECTION 4.2**

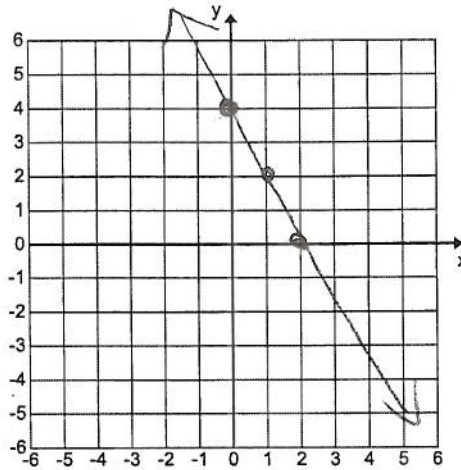
Graph

$$\begin{array}{r|l} x & y \\ 2 & 0 \\ 0 & 4 \end{array}$$

$y + 2x = 4$

$y = mx + b$

$y = \frac{-2x + 4}{1}$



The distance in miles an elephant walks in  $t$  hours is given by  $d = 5t$ . The elephant walks for 2.5 hours. Graph the function and identify its domain and range.

between 0 & 2.5 hrs

Domain:  $0 \leq t \leq 2.5$  ( $t \geq 0$ ,  $t \leq 2.5$ )

Range:  $0 \leq d \leq 12.5$

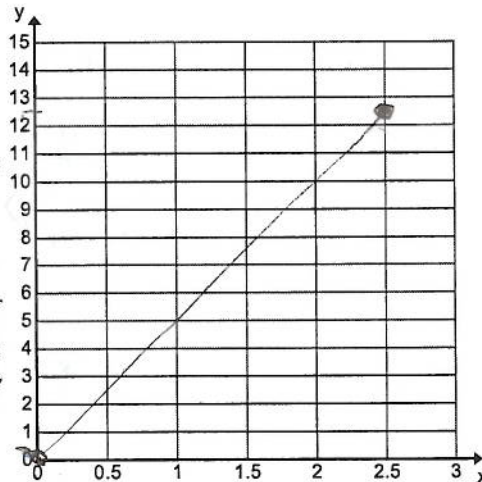
$d = 5t$

$d = 5 \cdot 0$

$d = 5 \cdot 2.5$

$$\begin{array}{r|l} t & d \\ 0 & 0 \text{ (0,0)} \\ 2.5 & 12.5 \text{ (2.5, 12.5)} \end{array}$$

Range between 0-12.5



$d = 5t$

$$\begin{array}{r|l} t & d \\ 0 & 0 \\ 2.5 & 12.5 \end{array}$$

**SECTION 4.3**

Find the  $x$  - intercept and the  $y$  - intercept of the graph of

$3x - y = 3$

$x$  - int = 1

coordinate (1, 0)

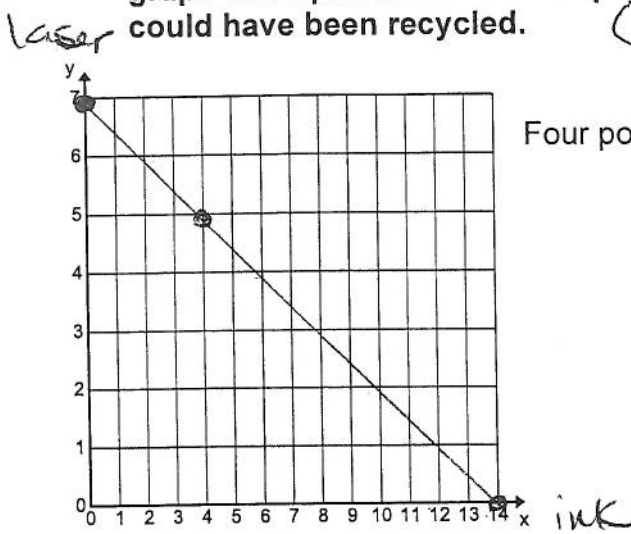
$$\begin{array}{r|l} x & y \\ 1 & 0 \\ 0 & -3 \end{array}$$

$y$  - int = -3

coordinate (0, -3)

$3x - 1(0) = 3$

A recycling company pays \$1 per used ink jet cartridge and \$2 per used laser cartridge. The company paid a customer \$14. This situation is given by  $x + 2y = 14$  where  $x$  is the number of ink jet cartridges and  $y$  the number of laser cartridges. Use intercepts to graph the equation. Give four possibilities for the number of each type of cartridge that could have been recycled.



(ink, laser)  
x y

Four possibilities \_\_\_\_\_

- $x + 2y = 14$
- |           |                 |
|-----------|-----------------|
| $(0, 7)$  | 0 ink, 7 laser  |
| $(14, 0)$ | 14 ink, 0 laser |
| $(4, 5)$  | 4 ink, 5 laser  |
| $(2, 6)$  | 2 ink, 6 laser  |
| $(12, 1)$ | 12 ink, 1 laser |
| $(10, 2)$ | 10 ink, 2 laser |
| $(6, 4)$  | 6 ink, 4 laser  |

$$\begin{array}{r|l} x & y \\ \hline 14 & 0 \\ 0 & 7 \end{array}$$

**SECTION 4.4**

Find the slope of the line that passes through the points.

(12, -1) and (-3, -1)

$$\frac{-1 - (-1)}{12 - (-3)} = \frac{0}{15} = 0$$

$$m = 0$$

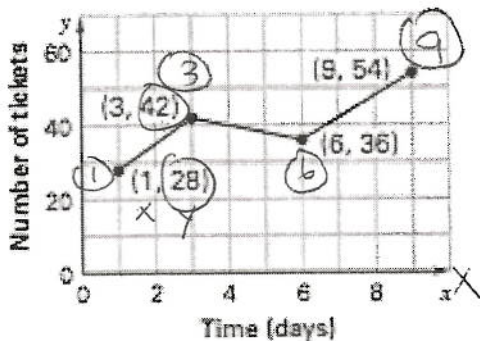
$$\begin{array}{r|l} x & y \\ \hline 12 & -1 \\ -3 & -1 \end{array}$$

$$\frac{0}{15} = 0$$

(-2, 6) and (4, -3)

$$\frac{6 - (-3)}{-2 - 4} = \frac{9}{-6} = \boxed{-\frac{3}{2}}$$

The graph shows the ticket sales for a school dance on day 1, day 3, day 6, and day 9 of ticket sales. Describe the rates of change in ticket sales with respect to time.



$$D_{1-3}: \frac{42 - 28}{3 - 1} = \frac{14}{2} = 7 \text{ tickets/day}$$

$$D_{3-6}: \frac{42 - 36}{3 - 6} = \frac{6}{-3} = -2 \text{ +/day}$$

$$D_{6-9}: \frac{54 - 36}{9 - 6} = \frac{18}{3} = 6 \text{ +/day}$$