

①⑥ (9, -2) (4, 3)

$$m = \frac{3 - (-2)}{4 - 9} = \frac{5}{-5} = -1$$

$$3 = (-1)(4) + b$$

$$\begin{array}{r|l} 3 & -4 + b \\ +4 & +4 \\ \hline 7 & b \end{array}$$

$$\underline{\underline{y = -x + 7}}$$

①⑦ (-2, 5) (5, -2)

$$m = \frac{-2 - 5}{5 - (-2)} = \frac{-7}{7} = -1$$

$$-2 = (-1)(5) + b$$

$$\begin{array}{r|l} -2 & -5 + b \\ +5 & +5 \\ \hline 3 & b \end{array}$$

$$\underline{\underline{y = -x + 3}}$$

①⑧ (-5, 3) (0, -7)

$$m = \frac{-7 - 3}{0 - (-5)} = \frac{-10}{5} = -2$$

$$-7 = (-2)(0) + b$$

$$-7 = b$$

$$\underline{\underline{y = -2x - 7}}$$

①⑨ (3, 5) (2, -2)

$$m = \frac{-2 - 5}{2 - 3} = \frac{-7}{-1} = 7$$

$$-2 = 7(2) + b$$

$$\begin{array}{r|l} -2 & 14 + b \\ -14 & -14 \\ \hline -16 & b \end{array}$$

$$\underline{\underline{y = 7x - 16}}$$

②⑩ (-1, -3) (-2, 3)

$$m = \frac{3 - (-3)}{-2 - (-1)} = \frac{6}{-1} = -6$$

$$3 = (-6)(-2) + b$$

$$\begin{array}{r|l} 3 & 12 + b \\ -12 & -12 \\ \hline -9 & b \end{array}$$

$$\underline{\underline{y = -6x - 9}}$$

②① (-2, -4) (2, 4)

$$m = \frac{4 - (-4)}{2 - (-2)} = \frac{8}{4} = 2$$

$$4 = 2(2) + b$$

$$\begin{array}{r|l} 4 & 4 + b \\ -4 & -4 \\ \hline 0 & b \end{array}$$

$$\underline{\underline{y = 2x}}$$

②② The car travels from 5 to 35 in 2 seconds. That is 30 ft in 2 seconds or 15 ft/sec.

$y = 15x + 5$  The 15 is for the ft/sec. The 5 is for the distance the

car already away.

$$y = 15(10) + 5$$

$$y = 150 + 5$$

$$y = 155$$

(23) 2006 1.6       $m = \frac{2.2 - 1.6}{9 - 6} = \frac{0.6}{3} = \frac{1}{5}$        $\left(\frac{0.6}{3} = \frac{6}{30} = \frac{1}{5}\right)$   
 2009 2.2

$$2.2 = \frac{1}{5}(9) + b$$

$$2.2 \quad \begin{array}{r} \uparrow \\ 1.8 + b \\ -1.8 \quad | \quad -1.8 \\ \hline 0.4 = \quad b \end{array}$$

$$y = \frac{1}{5}x + 0.4 \quad \text{or} \quad y = \frac{1}{5}x + \frac{2}{5}$$

$$y = \frac{1}{5}(14) + \frac{2}{5}$$

$$y = \frac{14}{5} + \frac{2}{5}$$

$$y = \frac{16}{5} = 3\frac{1}{5} = 3.2 \text{ million}$$

(24)  $C = 0.06x + 0.30$

$$C = 116(0.06) + 0.30$$

$$C = 6.96 + 0.30$$

$$C = 7.26$$

(25)  $2 = \frac{1}{2}(4) + b$

$$\begin{array}{r} 2 \quad \uparrow \quad 2 + b \\ -2 \quad | \quad -2 \\ \hline 0 = \quad b \end{array}$$

$$y = \frac{1}{2}x$$

(26)  $-2 = \frac{1}{3}(3) + b$

$$\begin{array}{r} -2 \quad \uparrow \quad 1 + b \\ -1 \quad | \quad -1 \\ \hline -3 = \quad b \end{array}$$

$$y = \frac{1}{3}x - 3$$

(27)  $4 = -\frac{3}{4}(6) + b$

$$\begin{array}{r} 4 \quad \uparrow \quad -4.5 + b \\ +4.5 \quad | \quad +4.5 \\ \hline 8.5 = \quad b \end{array}$$

$$y = -\frac{3}{4}x + 8.5$$

(28)  ~~$4 = -\frac{3}{4}(6) + b$~~

$$-3 = \frac{2}{3}(2) + b$$

$$\begin{array}{r} -3 \quad \uparrow \quad \frac{4}{3} + b \\ -\frac{4}{3} \quad | \quad -\frac{4}{3} \\ \hline -4\frac{1}{3} = \quad b \end{array}$$

$$y = \frac{2}{3}x - 4\frac{1}{3}$$

(29)  $-2 = \frac{2}{7}(2) + b$

$$\begin{array}{r} -2 \quad \uparrow \quad \frac{4}{7} + b \\ -\frac{4}{7} \quad | \quad -\frac{4}{7} \\ \hline -2\frac{4}{7} = \quad b \end{array}$$

$$y = \frac{2}{7}x - 2\frac{4}{7}$$

(30)  $-2 = -\frac{3}{5}(-4) + b$

$$\begin{array}{r} -2 \quad \uparrow \quad \frac{12}{5} + b \\ -\frac{12}{5} \quad | \quad -\frac{12}{5} \\ \hline -4\frac{2}{5} = \quad b \end{array}$$

$$y = -\frac{3}{5}x - 4\frac{2}{5}$$