

$$\textcircled{12} \quad f(-3)=2 \quad f(1)=0$$

$$(-3, 2) \quad (1, 0)$$

$$m = \frac{0-2}{1-(-3)}$$

$$= \frac{-2}{4}$$

$$\underline{m = -\frac{1}{2}}$$

$$y = mx + b$$

$$0 = -\frac{1}{2}(1) + b$$

$$0 = -\frac{1}{2} + b$$

$$\underline{b = \frac{1}{2}}$$

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

$$\textcircled{13} \quad f(3)=-3 \quad f(4)=1$$

$$(3, -3) \quad (4, 1)$$

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

$$= \frac{4}{1}$$

$$\underline{m = 4}$$

$$y = mx + b$$

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

$$1 = 16 + b$$

$$\underline{b = -15}$$

$$\boxed{y = 4x - 15}$$

$$\textcircled{15} \quad 4(1) + 6(50) = 304$$

$$4 + 300 = 304$$

$$304 = 304 \checkmark$$

$$4(76) + 6(0) = 304$$

$$304 = 304 \checkmark$$

- 1 seat cushion, 50 license plate holders
- 76 seat cushions, 0 license plate holders.

$$\textcircled{16} \text{ [a]} \quad (4, 7) \quad y = \frac{1}{2}x - 1$$

slope of parallel line $\rightarrow \frac{1}{2}$

$$y = mx + b$$

$$7 = \frac{1}{2}(4) + b$$

$$7 = 2 + b$$

$$\underline{b = 5}$$

$$\boxed{y = \frac{1}{2}x + 5}$$

$$\text{[b]} \quad (4, 7) \quad y = \frac{1}{2}x - 1$$

slope of perpendicular line $\rightarrow -2$

$$y = mx + b$$

$$7 = -2(4) + b$$

$$7 = -8 + b$$

$$\underline{b = 15}$$

$$\boxed{y = -2x + 15}$$

- $\textcircled{14}$ Let the # of seat cushions the student sold $\rightarrow x$
 " " license plate holders the student sold $\rightarrow y$

$$ax + by = c$$

$$\boxed{4x + 6y = 304}$$