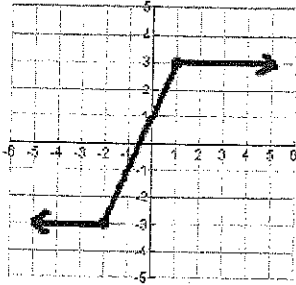
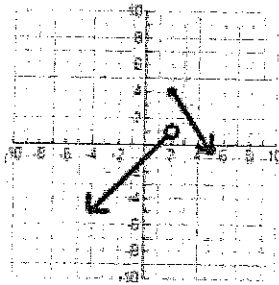


1) Find the domain and range:



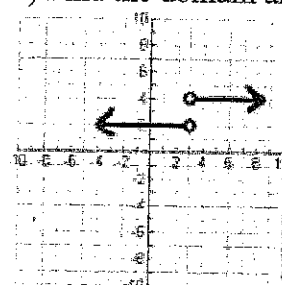
D: all Real R:  $[-3, 3]$

2) Find the domain and range:



D: all R R:  $y \leq 4$

3) Find the domain and range:



D:  $x \neq 3$  R:  $\{2, 4\}$

Evaluate.

4)  $h(n) = -2n^2 + 4$ ; Find  $h(-5)$

$$\begin{aligned} h(-5) &= -2(-5)^2 + 4 = -2(25) + 4 \\ &= -50 + 4 \\ &= \boxed{-46} \end{aligned}$$

5)  $p(t) = 4t - 5$ ; Find  $p(t+4)$

$$\begin{aligned} p(t+4) &= 4(t+4) - 5 \\ &= 4t + 16 - 5 \\ &= \boxed{4t + 11} \end{aligned}$$

Answer the multiple choice question wisely.

6) Find the slope given  $(-3, 6)$  and  $(-7, 3)$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 6}{-7 - (-3)} = \frac{-3}{-4} = \boxed{\frac{3}{4}}$$

7) Find  $k$  given  $m = -1$  and points  $(-4, 2k)$  and  $(k, -5)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad -1 = \frac{-5 - 2k}{k - (-4)} = \frac{-5 - 2k}{k + 4}$$

$$\begin{aligned} -1(k+4) &= -5 - 2k \\ -k - 4 &= -5 - 2k \\ +2k + 4 & \quad +4 + 2k \end{aligned}$$

$$k = -1$$

$$\boxed{k = -1}$$

$(-4, -2)$   $(-1, -5)$

8-9) State the value of the *slope* that is parallel and *slope* that is perpendicular to  $\frac{-5}{2}$ .

parallel =  $\boxed{\frac{-5}{2}}$  perpendicular =  $\boxed{\frac{2}{5}}$

10) State the x-intercept and y-intercept for the equation  $3y + 12 = 5x$ .

x-int:  $(x, 0)$

y-int:  $(0, y)$

$$3(0) + 12 = 5x$$

$$3y + 12 = 5(0)$$

$$12 = 5x$$

$$3y + 12 = 0$$

$$x = \frac{12}{5}$$

$$3y = -12$$

$$\boxed{(2.4, 0)}$$

$$\boxed{(0, -4)}$$

$$y = -4$$

11) Write the equation of the line through  $(-4, 1)$

and perpendicular to  $y = \frac{-2}{3}x + 7$ .

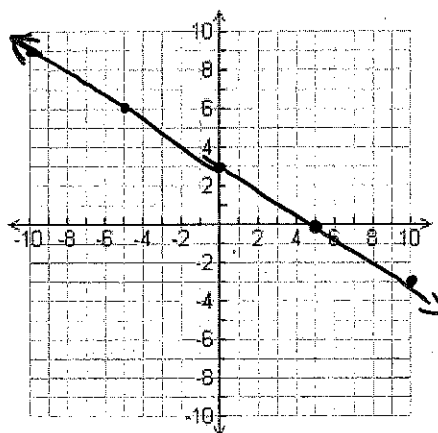
$$m_{\perp} = \frac{3}{2} \quad (-4, 1)$$

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

$$y - 1 = \frac{3}{2}x + 6$$

$$y = \frac{3}{2}x + 7$$

12) Graph  $3x + 5y = 15$



$(5, 0)$

$(0, 3)$

13-16) List the transformations  $y = -\frac{1}{2}(x+2)^2 + 7$

T1: Horizontal shift left 2

T2: Vertical shrink by  $\frac{1}{2}$

T3: Reflection over x-axis

T4: Vertical shift up 7

17) Draw a scatter plot for each correlation.

a) Positive Correlation



b) Negative Correlation



c) No Correlations

