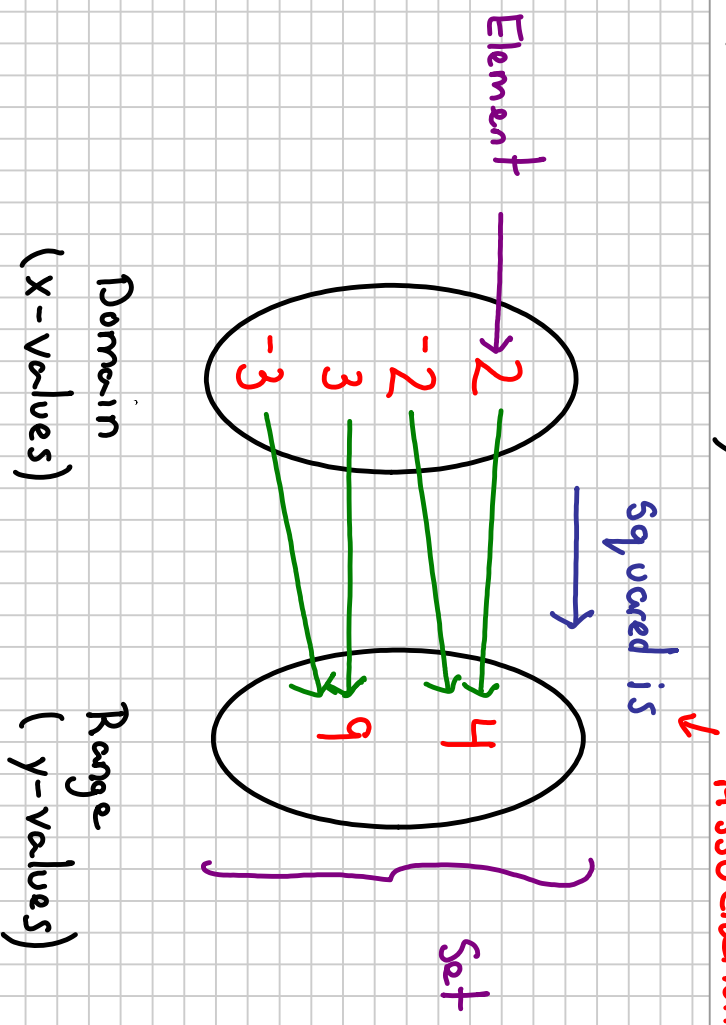


Chapter 5 Summary

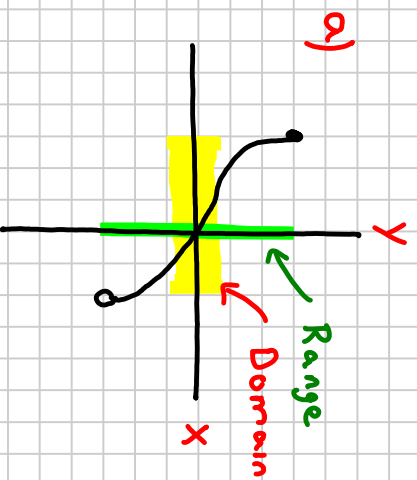
Association

①



Yes Function - No repeats in the domain

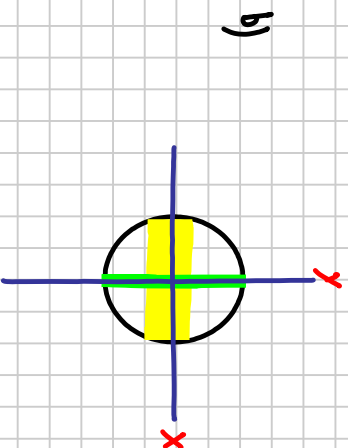
② Determine the domain and range.



$$D = -3 \leq x < 2 \quad \text{or} \quad [-3, 2)$$

$$R = -3 < y \leq 3 \quad \text{or} \quad (-3, 3]$$

Yes Function - passes vertical
line test



$$D = -2 \leq x \leq 2 \quad [-2, 2]$$

$$R = -2 \leq y \leq 2 \quad [-2, 2]$$

Not Function - Fails VLT

③ Function Notation: $F(x) = -5x - 2$

a) $F(-2)$

$$F(-2) = -5(-2) - 2$$

$$F(-2) = 10 - 2$$

$$F(-2) = 8$$

b) $F(x) = -12$

$$-12 = -5x - 2$$

$$\begin{array}{r} +2 \\ \hline -12 = -5x - 2 \\ +2 \end{array}$$

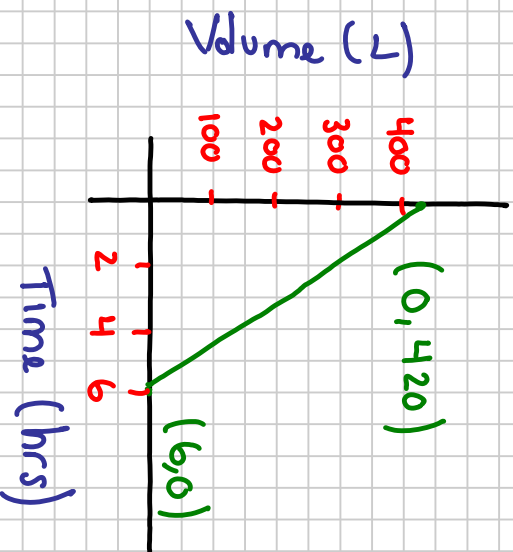
$$\begin{array}{r} -10 = -5x \\ \hline -5 \end{array} \quad \begin{array}{r} -5 \\ \hline -5 \end{array}$$

$$2 = x$$

therefore $F(2) = -12$

← means the answer is -12 Find out what the x-value is

④ Interpret Graphs



a) Determine the rate of change.

$$\text{slope} = \frac{Y_2 - Y_1}{X_2 - X_1}$$

$$m = \frac{420 - 0}{0 - 6} = \frac{420}{-6} = -70$$

means you lose 70L of water every hour

b) Vertical Intercept - starting volume 420 L

Horizontal Intercept - time it takes to drain - 6 hrs

c) Write the equation for the graph.

Think $y = mx + b$ $m = -70$

So... $y = -70x + 420$ $b = 420$

$f(x) = -70x + 420$ ← Function notation