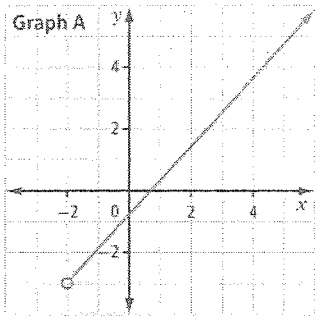
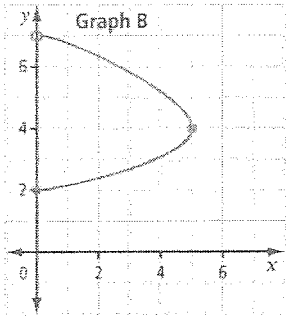
6.3b Domain and Range - Interval Notation

Find the domain and range using set notation:





Graph A

$\{x \mid x > -2,\ x \in R\}$

$\{y \mid y > -3,\ y \in R\}$

Graph B

$\{x \mid 0 \le x \le 5,\ x \in R\}$

$\{y \mid 2 \le y < 7,\ y \in R\}$

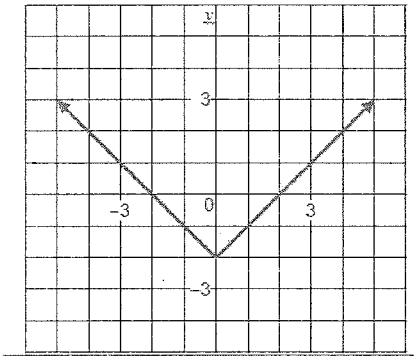
- **Interval Notation:** Uses different brackets to indicate an interval.

  This style of bracket, **]**, is used if the end number is **included**.

  This style of bracket, **)**, is used if the end number is **not included**.

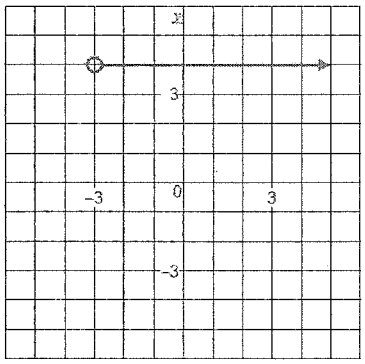
  The infinity symbol, **∞** , is used if there is **no endpoint.**

Examples: Determine the domain and range of the relations graphed below.
Use **interval notation.**



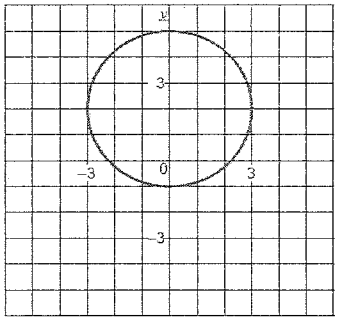
D: $(-\infty, \infty)$

R: $[-2, \infty)$



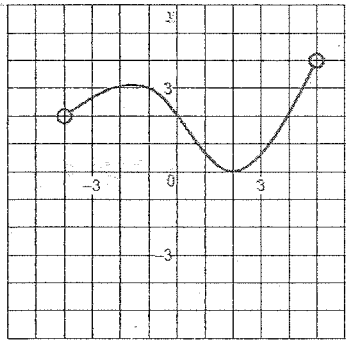
D: $(-3, \infty)$

R: $[4]$



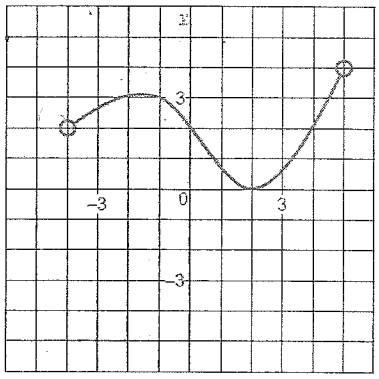
D: $[-3, 3]$

R: $[-1, 5]$



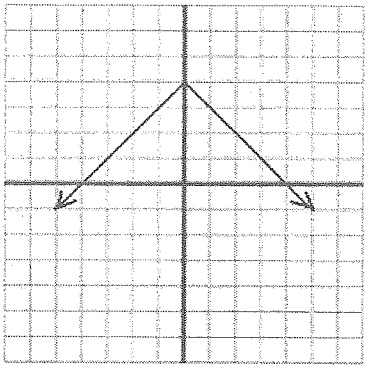
D: $(-4, 5)$

R: $[0, 4)$



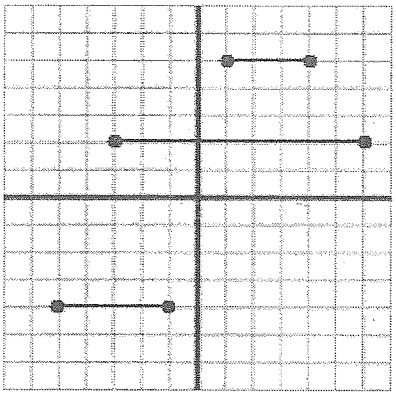
D: (-4, 5)

R: [0, 4)



D: $(-\infty, \infty)$

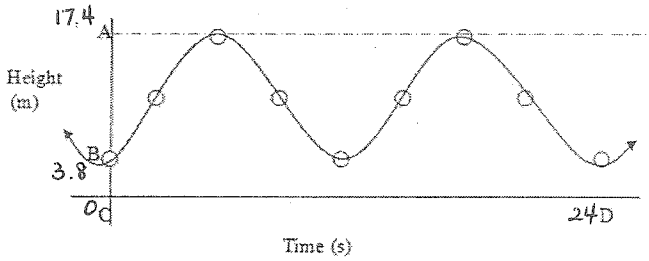
R: $(-\infty, 4]$



D: [-5, 6]

R: [-4] [2] [5]

- Tide levels for a 24 hour period starting at 12:00 am. High tide is 17.4 ft and low tide is 3.8 ft.



a) Label A,B,C and D

b) What is the range and domain of the graph?

D $(-\infty, \infty)$

R [3.8, 17.4]

Assignment -

-Domain and Range worksheet