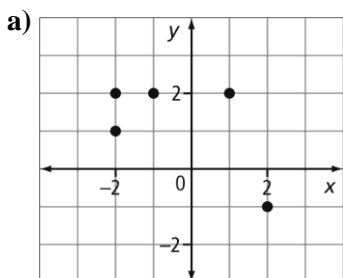


5.5B – Domain and Range WORKSHEET

Name: _____

Date: _____

1. List the domain and range of each relation.

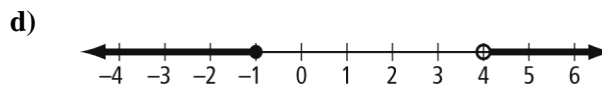
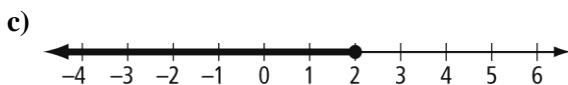
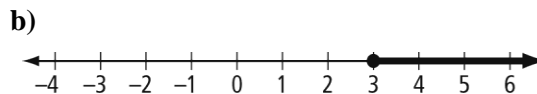
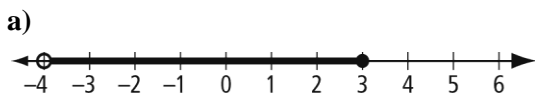


b)

x	y
7	3
5	2
3	1
1	0

c) (10, 5), (8, 4), (6, 3), (4, 2), (2, 1)

2. Describe the set of numbers indicated by each number line using **words** and **interval notation**.



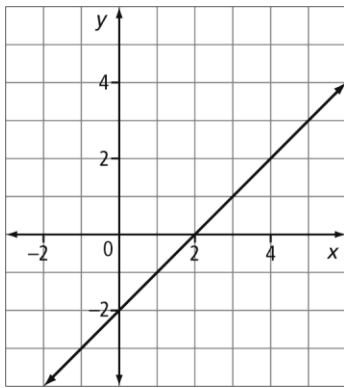
3. Represent the set of numbers indicated using a **number line**.

a) all real numbers less than 5 but greater than or equal to 0

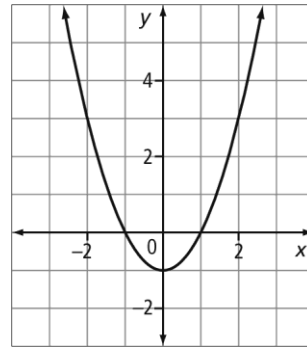
b) $(-4, 7]$

4. Give the domain and range of each graph using **words**, a **number line**, **interval notation**, and **set notation**.

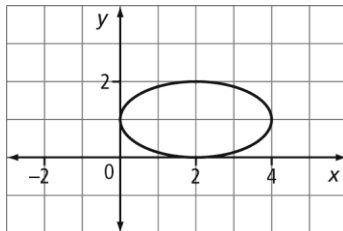
a)



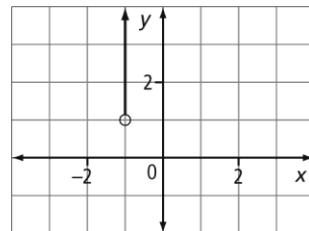
b)



c)



d)

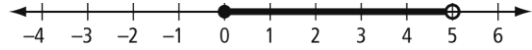


ANSWERS:

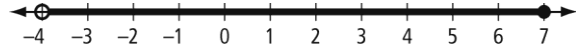
1. a) domain: $\{-2, -1, 1, 2\}$, range: $\{-1, 1, 2\}$ **b)** domain: $\{7, 5, 3, 1\}$, range: $\{3, 2, 1, 0\}$
c) domain: $\{10, 8, 6, 4, 2\}$, range: $\{5, 4, 3, 2, 1\}$

2. a) all real numbers greater than -4 and less than or equal to 3 , $(-4, 3]$
b) all real numbers greater than or equal to 3 , $[3, \infty)$ **c)** all real numbers less than or equal to 2 , $(-\infty, 2]$
d) all real numbers less than or equal to -1 as well as all real numbers greater than 4 , $(-\infty, -1]$ or $(4, \infty)$

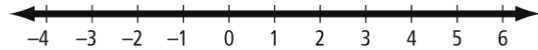
3. a)



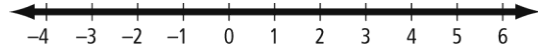
b)



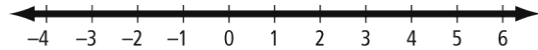
4. a) domain: all real numbers, $(-\infty, \infty)$, $\{x \in \mathbb{R}\}$



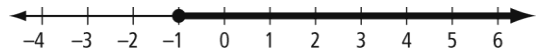
range: real numbers, $(-\infty, \infty)$, $\{y \in \mathbb{R}\}$



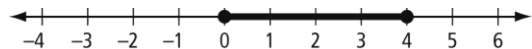
b) domain: all real numbers, $(-\infty, \infty)$, $\{x \in \mathbb{R}\}$



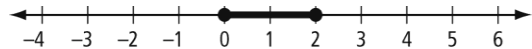
range: all real numbers greater than or equal to -1 , $[-1, \infty)$, $\{y \mid y \geq -1, y \in \mathbb{R}\}$



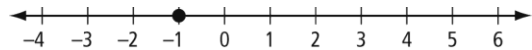
c) domain: all real numbers greater than or equal to 0 and less than or equal to 4 , $[0, 4]$, $\{x \mid 0 \leq x \leq 4, x \in \mathbb{R}\}$



range: all real numbers greater than or equal to 0 and less than or equal to 2 , $[0, 2]$, $\{y \mid 0 \leq y \leq 2, y \in \mathbb{R}\}$



d) domain: negative one, $[-1, -1]$, $\{x = -1\}$



range: all real numbers greater than 1 , $(1, \infty)$, $\{y \mid y > 1, y \in \mathbb{R}\}$

