KEY

NAME

Math 10C - Domain and Range Asn.

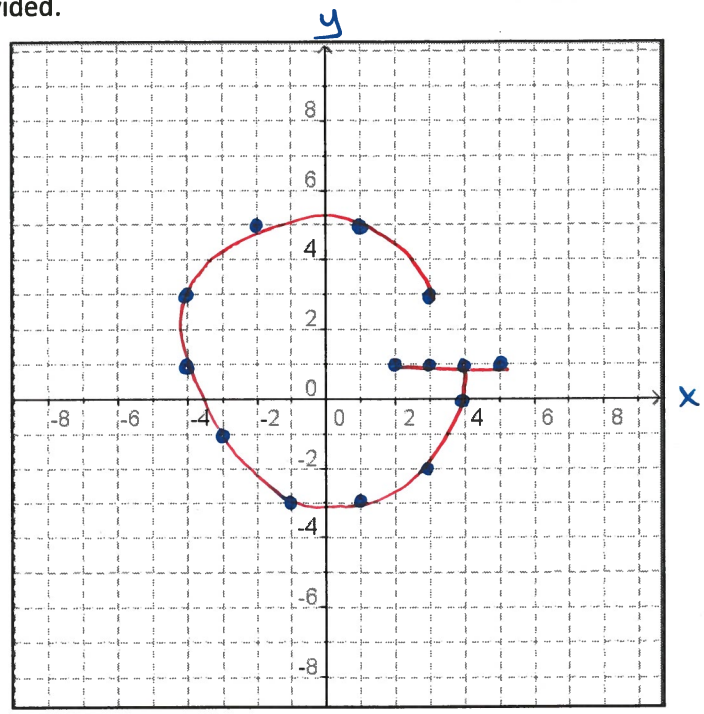
1. Plot the following points on the grid provided.

(x,y)

A(-4,1) B(-4,3) C(5,1) D(4,0) E(1,-3)

F(3,-2) G(-2,5) H(3,3) I(3,1) J(-3,-1)

K(1,5) L(4,1) M(-1,-3) N(2,1)



What letter do they form?

G

2. Write the domain and range of the following relations as a **LIST**.

a. (3,2), (2,3), (3,3)

Domain: {2, 3}
Range: {2, 3}

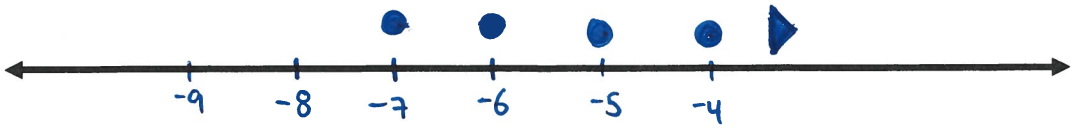
b. (5,-2), (3,2), (6,2), (-4,3)

Domain: {-4, 3, 5, 6}
Range: {-2, 2, 3}

3. Write the domain and range of the following relations as a **NUMBER LINE**.

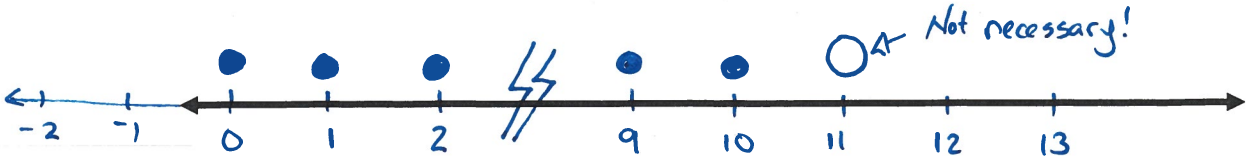
a. The domain is all integer values of x greater than or equal to negative seven.

Not continuous



b. The range is all whole values of y less than eleven.

O+ Not equal to.

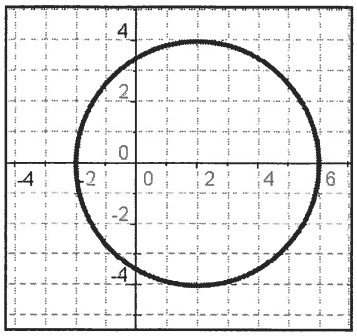


O↗ Not necessary!

KEY

4. Write the domain and range of the following relations as **WORDS**.

a.



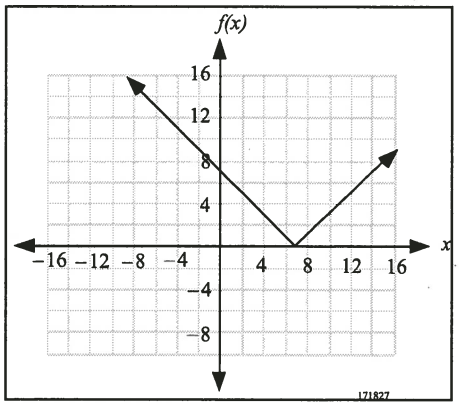
- Domain is all x-values greater than or equal to -2 and less than or equal to 6.
- Range is all y-values greather than or equal to -4 and less than or equal to 4.

b. (2, -5), (6,-1), (10,3), (4, 5), (8,-3), (4,1)

Domain is 2, 4, 6, 8, 10.
Range is -5, -3, -1, 1, 3, 5.

5. Write the domain and range of the following relations in **SET NOTATION**.

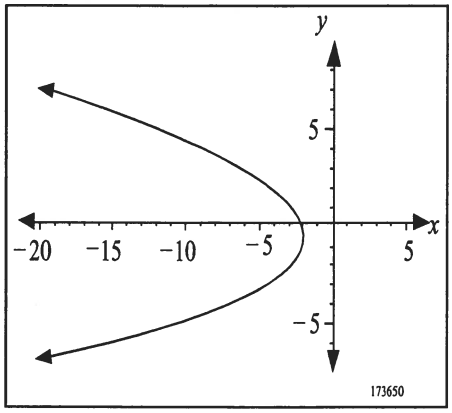
a.



Domain: $\{x \mid -\infty < x < \infty, x \in \mathbb{R}\}$

Range: $\{y \mid 0 \leq y < \infty, y \in \mathbb{R}\}$

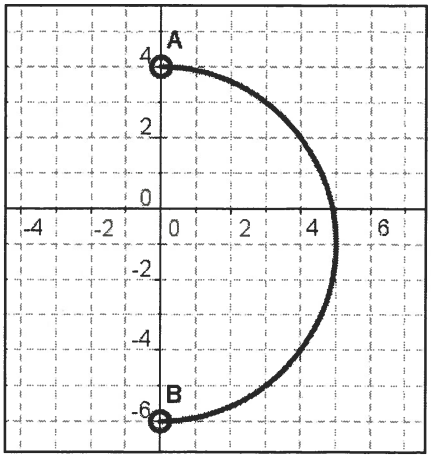
b.



Domain: $\{x \mid -\infty < x \leq -2, x \in \mathbb{R}\}$

Range: $\{y \mid -\infty < y < \infty, y \in \mathbb{R}\}$

c.



Domain: $\{x \mid 0 < x \leq 5, x \in \mathbb{R}\}$

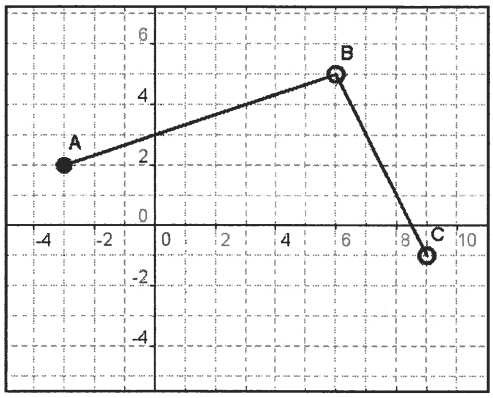
Range: $\{y \mid -6 < y < 4, y \in \mathbb{R}\}$

KEY

6. Write the domain and range for the following in **INTERVAL NOTATION**.
   a. The set of all real x values greater than negative two and less than or equal to five.

Domain: $(-2, 5]$

   b.

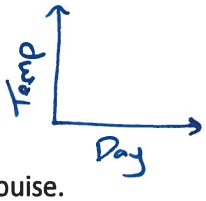


Domain: $[-3, 9)$

Range: $(-1, 5)$

7. Write a possible domain and range for the following scenarios.
   a. Temperature in Stettler throughout the year.

Domain: $[1, 365]$ ← Days
Range: $[-45, 36]$ ← Temp (°C)



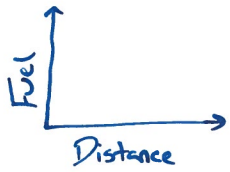
   b. Speed of a snowboarder throughout the day at Lake Louise.

Domain: $[0, 24]$ ← 24 hr clock
Range: $[0, 35]$ ← Speed (mph)

   c. Potential winnings of a 50/50 draw at a local hockey game.

Domain: $[1, 18{,}910]$ ← Seating at Roger's Arena in Vancouver
Range: $[5, 94{,}550]$ ← Half of $10 per ticket, with 1 ticket per person sold.

   d. The volume of fuel in a car over distance traveled.



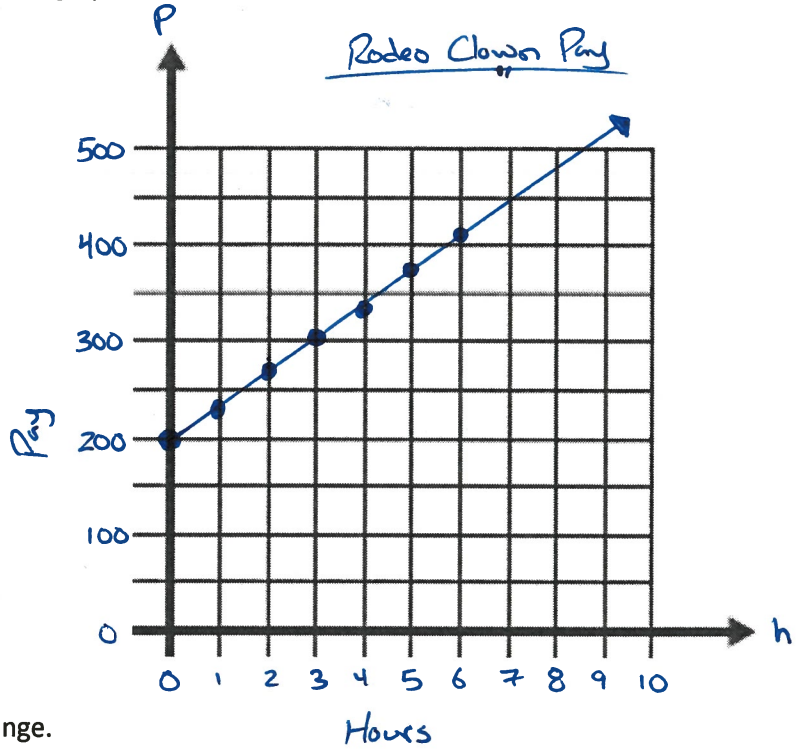
Domain: $[0, 300]$ ← Miles travelled
Range: $[0, 13.2]$ ← Gallons of fuel in a Ford Focus

KEY

8. A rodeo clown earns $35/hour plus $200 hazardous pay.

a. Create a table of values and graph the function.

Hours	Pay
0	200
1	235
2	270
3	305
4	340
5	375
6	410



b. State the domain and range.

Domain: $\{h \mid 0 \leq h < \infty, h \in \mathbb{R}\}$

Range: $\{p \mid 200 \leq p < \infty, p \in \mathbb{R}\}$

c. How many hours does the clown need to work in order to make $655.00?

Math 9 Method

$\text{Pay} = \underbrace{200}_{\text{constant}} + \underbrace{35}_{\text{rate}}\, h$

$655 = 200 + 35h$

$-200 \quad -200$

$455 = 35h$

$\div 35 \quad \div 35$

$35 = h$

Clown needs to work for 35 hours.

Math 10C Method (Chapter 7)

$y = mx + b$

m: Slope, b: y-intercept

$p = 35h + 200$

$655 = 35h + 200$

$h = 35$ hours.