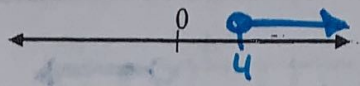
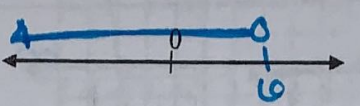
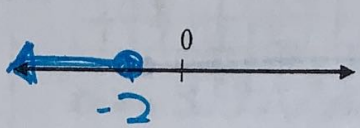
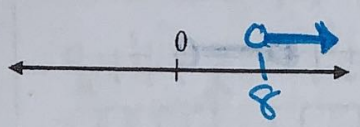
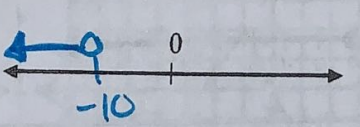







NAME: Key

Practice: Interval Notation

Put in interval notation AND draw a graph of each inequality.

- 1. $x \geq 4$  1. $[4, \infty)$
- 2. $x < 6$  2. $(-\infty, 6)$
- 3. $x \leq -2$  3. $(-\infty, -2]$
- 4. $x > 8$  4. $(8, \infty)$
- 5. $x < -10$  5. $(-\infty, -10)$

Write each interval as an inequality, and draw a graph for each.

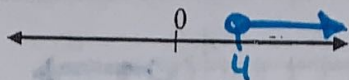
- 6. $(-\infty, -8]$  6. $x \leq -8$
- 7. $[5, \infty)$  7. $x \geq 5$
- 8. $(-2, \infty)$  8. $x > -2$
- 9. $[-10, \infty)$  9. $x \geq -10$
- 10. $(-\infty, 6)$  10. $x < 6$

NAME: Key

Practice: Interval Notation

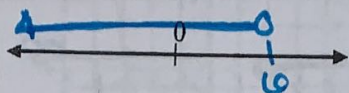
Put in interval notation AND draw a graph of each inequality.

1. $x \geq 4$



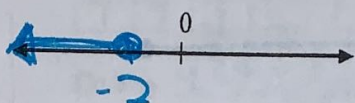
1. $[4, \infty)$

2. $x < 6$



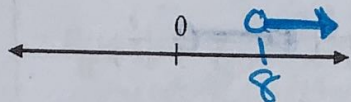
2. $(-\infty, 6)$

3. $x \leq -2$



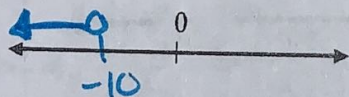
3. $(-\infty, -2]$

4. $x > 8$



4. $(8, \infty)$

5. $x < -10$



5. $(-\infty, -10)$

Write each interval as an inequality, and draw a graph for each.

6. $(-\infty, -8]$



6. $x \leq -8$

7. $[5, \infty)$



7. $x \geq 5$

8. $(-2, \infty)$



8. $x > -2$

9. $[-10, \infty)$



9. $x \geq -10$

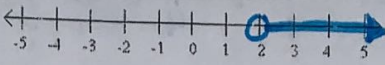

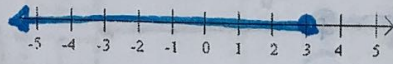

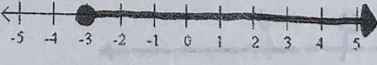
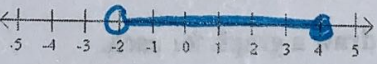
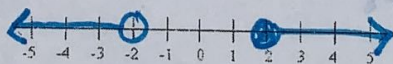


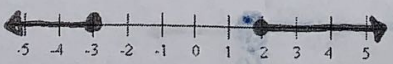
10. $(-\infty, 6)$



10. $x < 6$

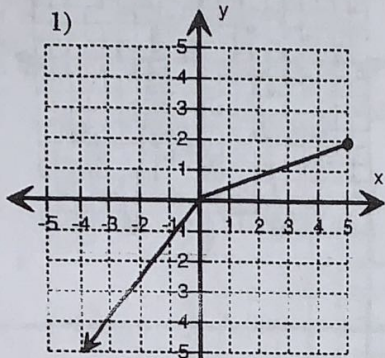
Interval Notation Practice

Fill in the blanks for each row.

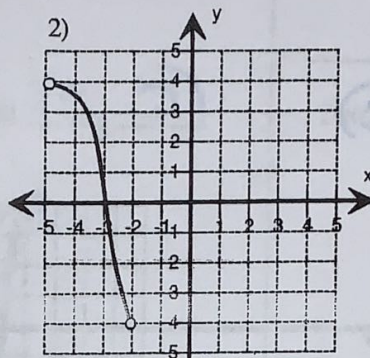
Inequality	Number Line	Interval Notation
1. $x > 2$		$(2, \infty)$
2. $x < -1$		$(-\infty, -1)$
3. $x \leq 3$		$(-\infty, 3]$
4. $-1 \leq x < 2$		$[-1, 2)$
5. $x \geq -3$		$[-3, \infty)$
6. $-2 < x \leq 4$		$(-2, 4]$
7. $x < -2$ or $x \geq 2$		$(-\infty, -2) \cup [2, \infty)$
8. $-5 < x \leq 0$		$(-5, 0]$
9. $x \leq 1$ or $x > 2$		$(-\infty, 1] \cup (2, \infty)$
10. $x \leq -3$ or $x \geq 2$		$(-\infty, -3] \cup [2, \infty)$

Domain and Range

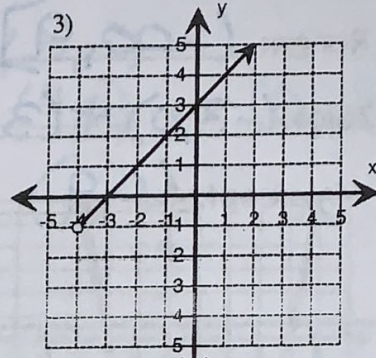
Find the Domain and Range for each graph.



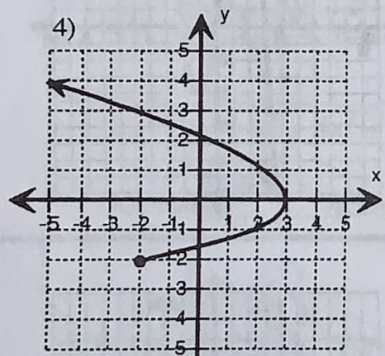
Domain: $(-\infty, 5]$
Range: $(-\infty, 2]$



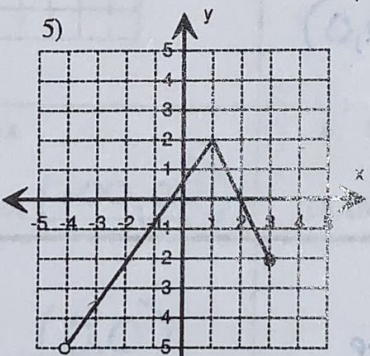
Domain: $(-5, -2)$
Range: $(-4, 4)$



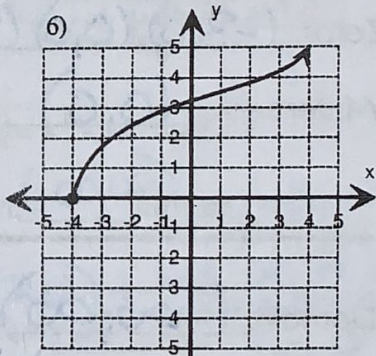
Domain: $(-4, \infty)$
Range: $(-1, \infty)$



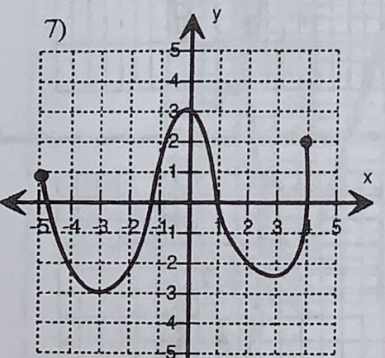
Domain: $(-\infty, 3]$
Range: $[-2, \infty)$



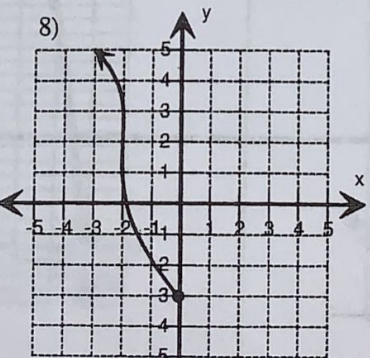
Domain: $(-4, 3]$
Range: $(-5, 2]$



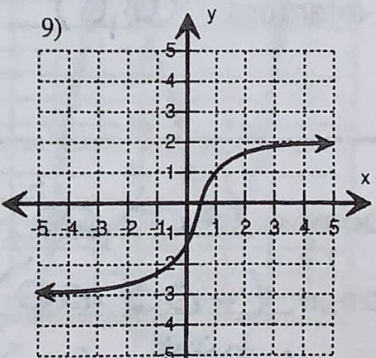
Domain: $[-4, \infty)$
Range: $[0, \infty)$



Domain: $[-5, 4]$
Range: $[-3, 3]$



Domain: $(-\infty, 0]$
Range: $[-3, \infty)$



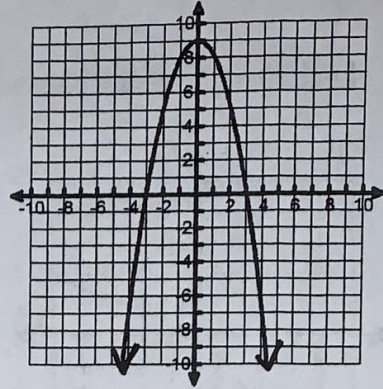
Domain: $(-\infty, \infty)$
Range: $(-\infty, \infty)$

Name: _____

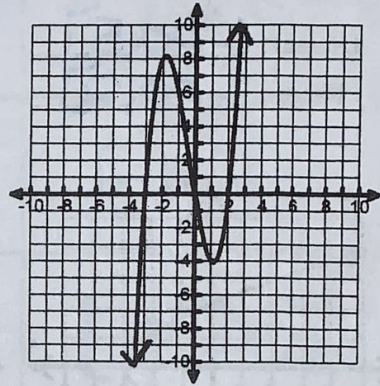
Date: _____

Identify the following characteristics given the graph:

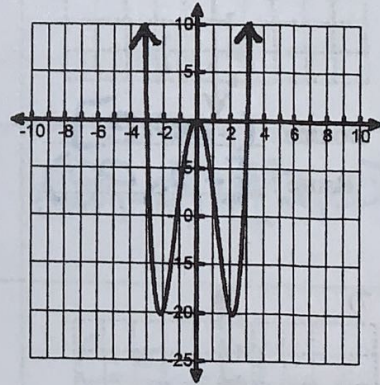
1. Domain: $(-\infty, \infty)$
 Range: $(-\infty, 9]$
 Zeros: $(-3, 0) + (3, 0)$
 Y-intercept: $(0, 9)$



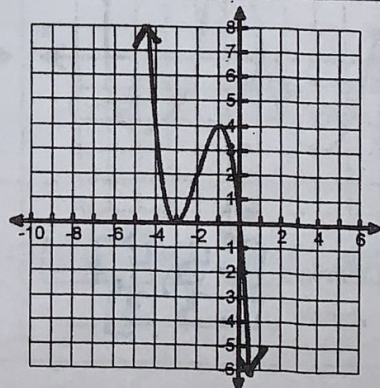
2. Domain: $(-\infty, \infty)$
 Range: $(-\infty, \infty)$
 Zeros: $(-3, 0) (0, 0) (2, 0)$
 Y-intercept: $(0, 0)$



3. Domain: $(-\infty, \infty)$
 Range: $[-20, \infty)$
 Zeros: $(-3, 0)$ ^{twice} $(0, 0)$ $(3, 0)$
 Y-intercept: $(0, 0)$



4. Domain: $(-\infty, \infty)$
 Range: $(-\infty, \infty)$
 Zeros: $(-3, 0)$ ^{twice} $(0, 0)$
 Y-intercept: $(0, 0)$



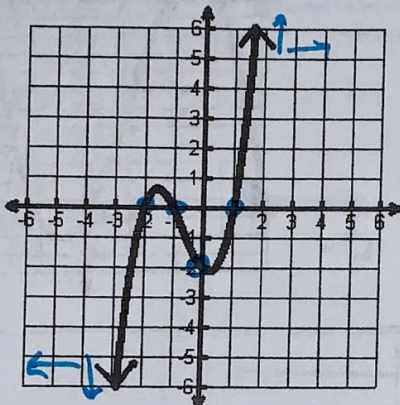
Name: _____

Date: _____

1. $f(x) = x^3 + 2x^2 - x - 2$

Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$

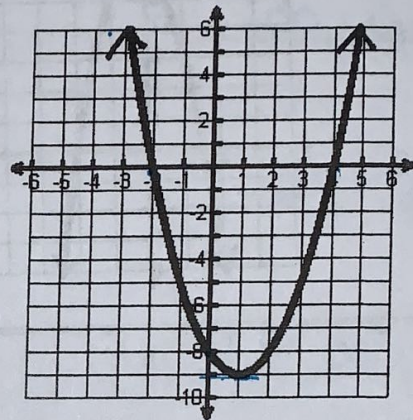
Zeros: $(-2, 0)$
 $(-1, 0)$
 $(1, 0)$ Y-Int: $(0, -2)$
 X-int



2. $f(x) = x^2 - 2x - 8$

Domain: $(-\infty, \infty)$ Range: $[-9, \infty)$

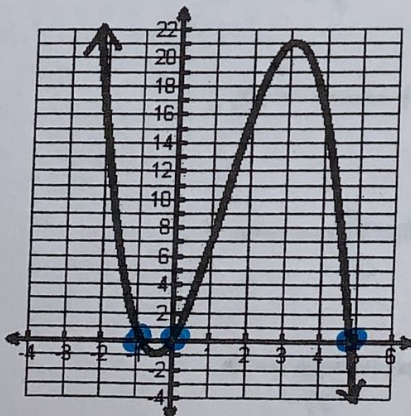
Zeros: $(-2, 0)$
 $(4, 0)$ Y-Int: $(0, -8)$



3. $f(x) = -x^3 + 4x^2 + 4x$

Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$

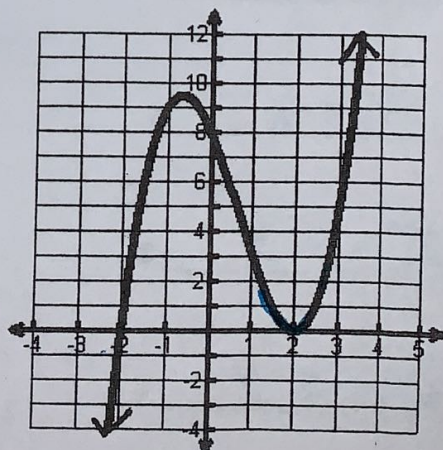
Zeros: $(-1, 0)$
 $(0, 0)$
 $(5, 0)$ Y-Int: $(0, 0)$



4. $f(x) = x^3 - 2x^2 - 4x + 8$

Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$

Zeros: $(2, 0)$ twice bc it bounced off x-axis.
 $(-2, 0)$ Y-Int: $(0, 8)$



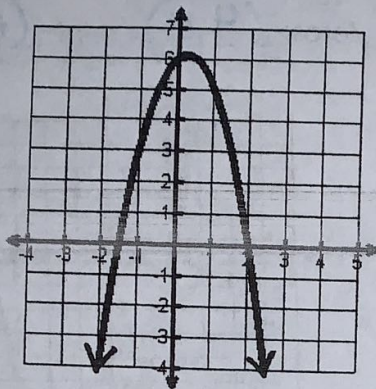
Name: _____

Date: _____

5. $f(x) = -2x^2 + x + 6$

Domain: $(-\infty, \infty)$ Range: $(-\infty, 6.125]$

Zeros: $(-1.5, 0)$ $(2, 0)$ Y-Int: $(0, 6)$



6. $f(x) = x^3 + 3x^2 - 4x - 12$

Domain: $(-\infty, \infty)$ Range: $(-\infty, \infty)$

Zeros: $(-3, 0)$ $(-2, 0)$ $(2, 0)$ Y-Int: $(0, -12)$

