

Name : _____

Score : _____

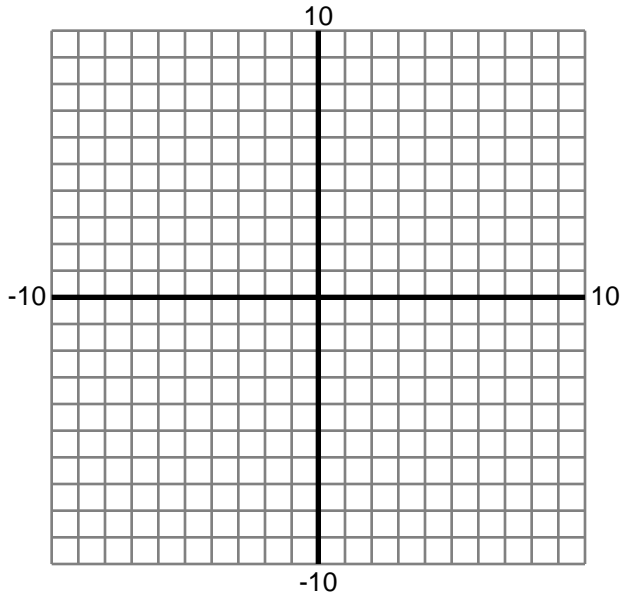
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

1) $f(x) = x^2 - 2x - 15$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

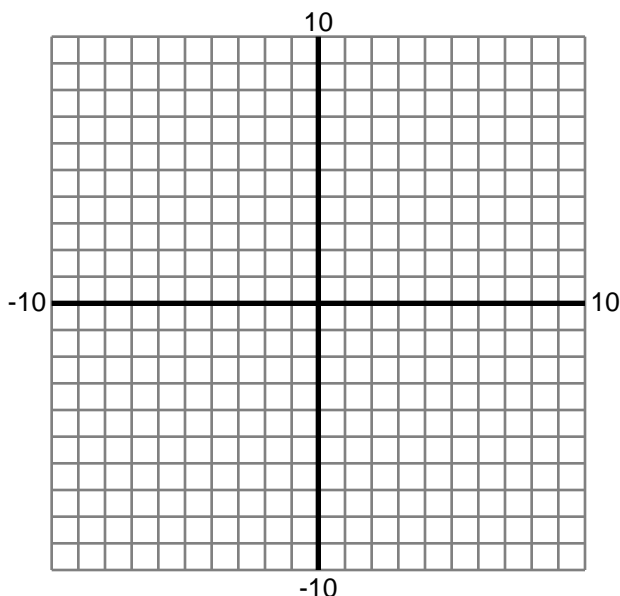
Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

2) $f(x) = \frac{3x-12}{x^2} + 2$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

Name : _____

Score : _____

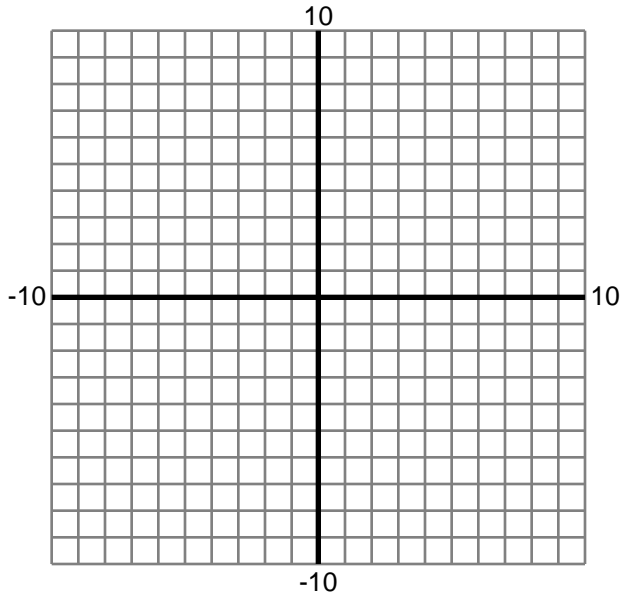
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

3) $f(x) = -\frac{1}{3}x^3 + 25x$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

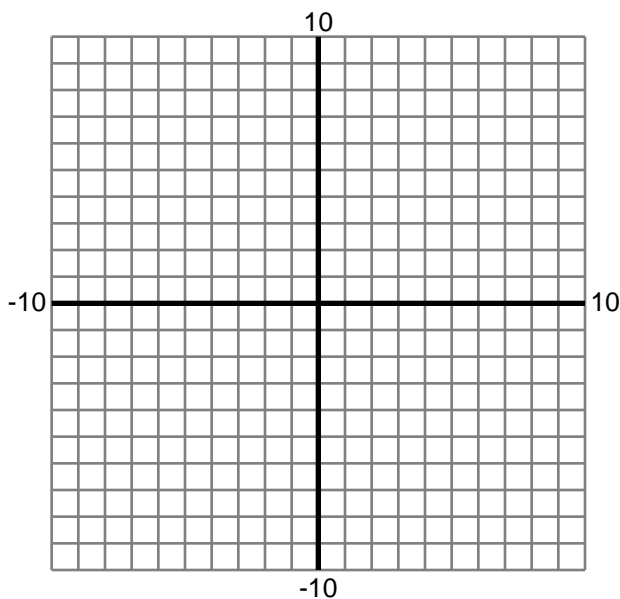
Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

4) $f(x) = -\frac{1}{3}x^3 - \frac{9}{2}x^2 - 20x$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

Name : _____

Score : _____

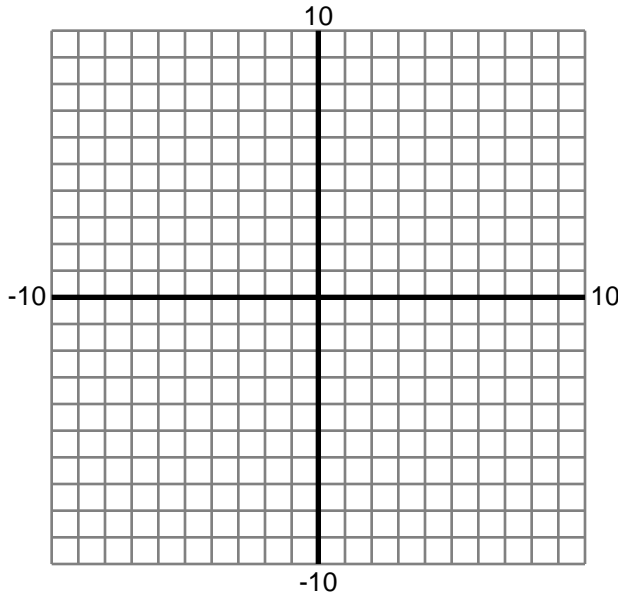
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

5) $f(x) = \frac{x(x^2-16)}{x^3}$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

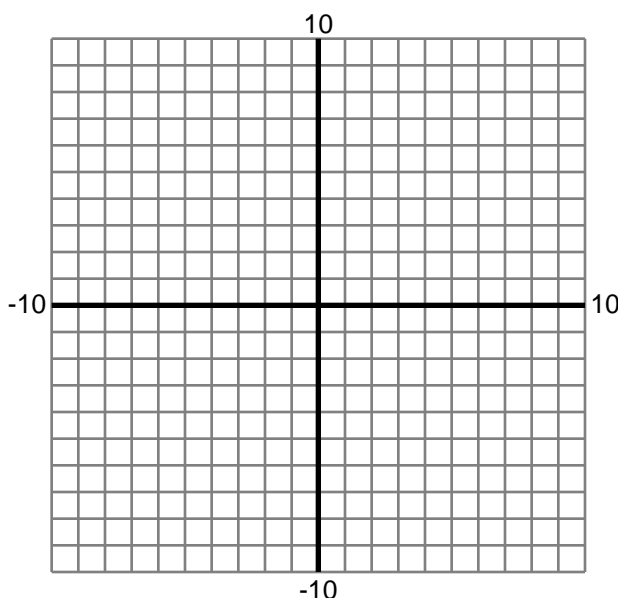
Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

6) $f(x) = \frac{1}{6}x^3 + \frac{1}{4}x^2$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima



Name : _____

Score : _____

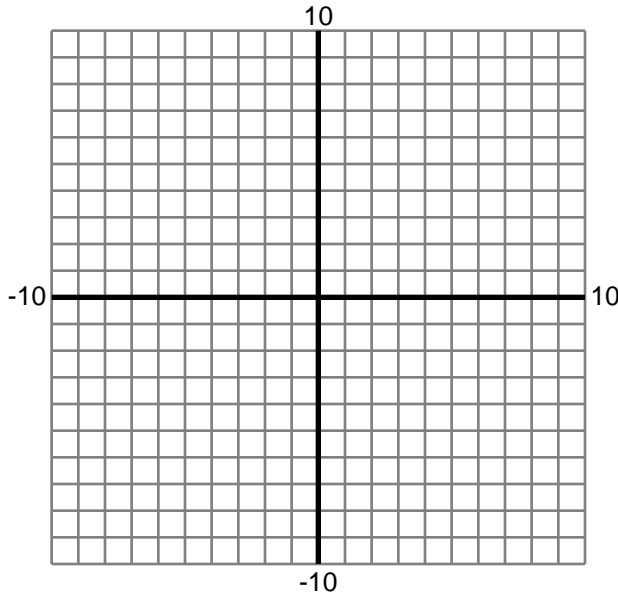
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

7) $f(x) = \frac{x(x+1)(x-3)}{x^3}$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

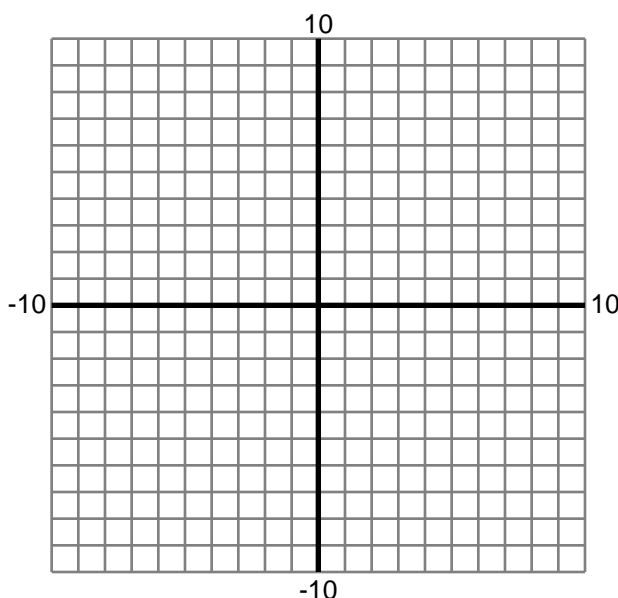
Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

8) $f(x) = x^2 - 10x + 25$



X-intercepts:

Y-intercept:

X-Values of Inflection Points:

X-Values of Critical Points:

Intervals Where Decreasing:

Intervals Where Increasing:

Intervals Where Concave Up:

Intervals Where Concave Down:

Relative Minima:

Relative Maxima

Name : _____

Score : _____

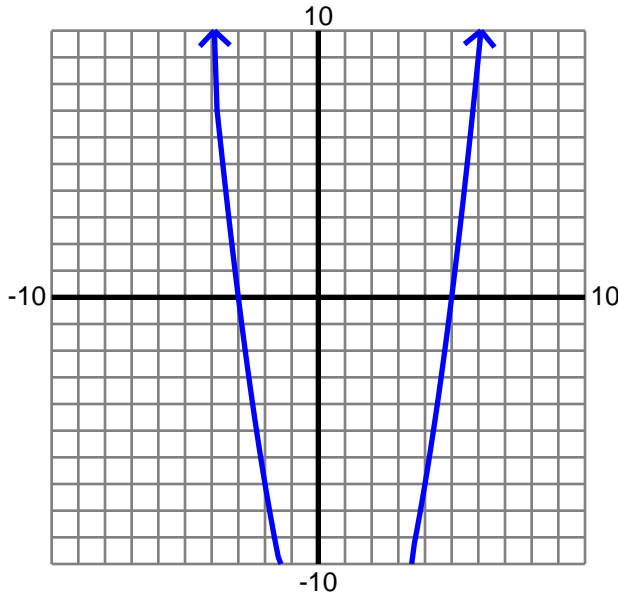
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

1) $f(x) = x^2 - 2x - 15$



X-intercepts: -3,5

Y-intercept: -15

X-Values of Critical Points: 1

X-Values of Inflection Points: None

Intervals Where Decreasing: $(-\infty, 1)$

Intervals Where Increasing: $(1, \infty)$

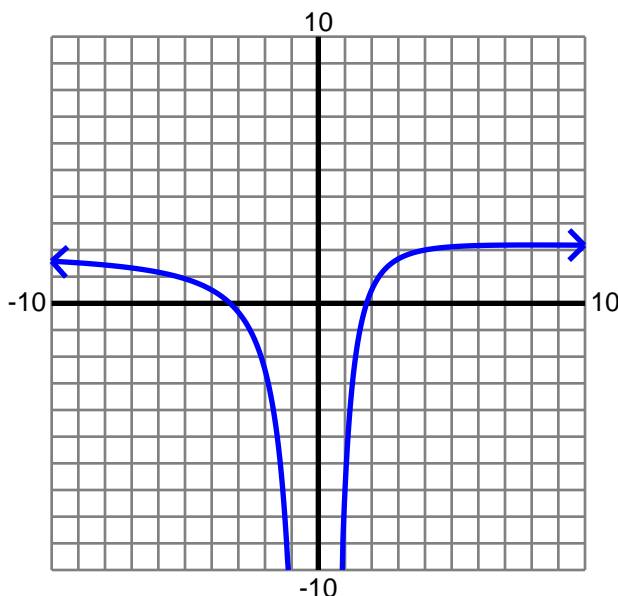
Intervals Where Concave Up: Always

Intervals Where Concave Down: Never

Relative Minima: 1

Relative Maxima: None

2) $f(x) = \frac{3x-12}{x^2} + 2$



X-intercepts: $\frac{-3+\sqrt{105}}{4}$, $\frac{-3-\sqrt{105}}{4}$

Y-intercept: None

X-Values of Critical Points: 8

X-Values of Inflection Points: 12

Intervals Where Decreasing: $(-\infty, 0) \cup (8, \infty)$

Intervals Where Increasing: $(0, 8)$

Intervals Where Concave Up: $(12, \infty)$

Intervals Where Concave Down: $(-\infty, 0) \cup (0, 12)$

Relative Minima: None

Relative Maxima: 8

Name : _____

Score : _____

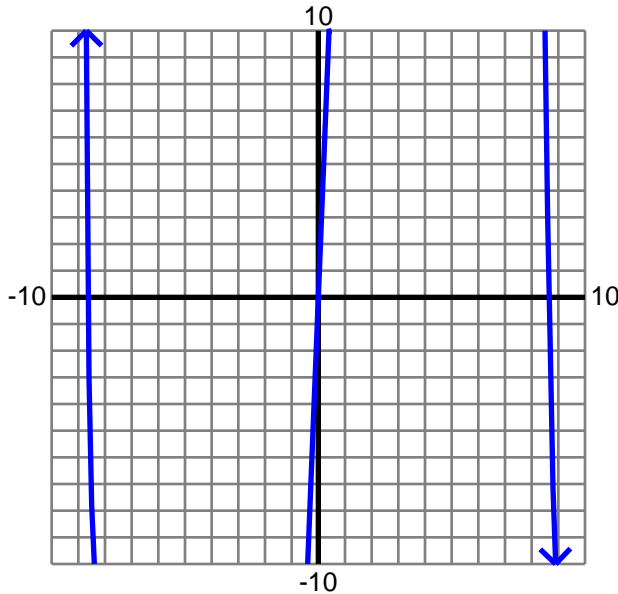
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

3) $f(x) = -\frac{1}{3}x^3 + 25x$



X-intercepts: $0, \frac{-3}{2}(\sqrt{\frac{100}{3}}), \frac{-3}{2}(-\sqrt{\frac{100}{3}})$

Y-intercept: 0

X-Values of Critical Points: -5,5

X-Values of Inflection Points: 0

Intervals Where Decreasing: $(-\infty, -5) \cup (5, \infty)$

Intervals Where Increasing: $(-5, 5)$

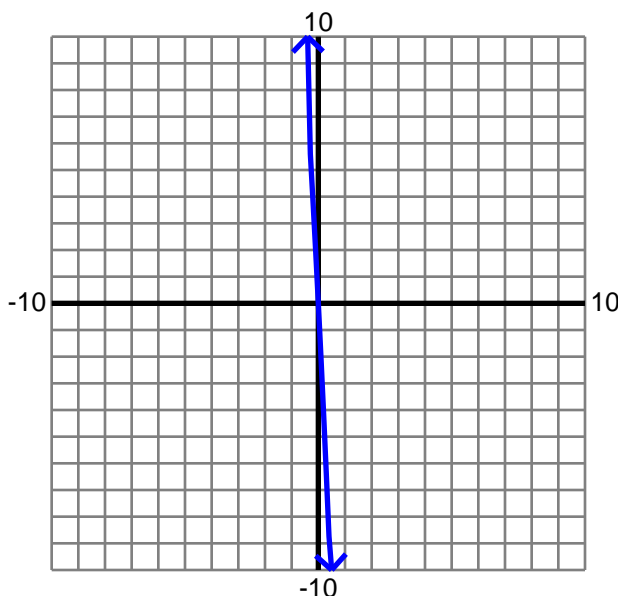
Intervals Where Concave Up: $(-\infty, 0)$

Intervals Where Concave Down: $(0, \infty)$

Relative Minima: -5

Relative Maxima: 5

4) $f(x) = -\frac{1}{3}x^3 - \frac{9}{2}x^2 - 20x$



X-intercepts: 0

Y-intercept: 0

X-Values of Critical Points: -5,-4

X-Values of Inflection Points: -4.5

Intervals Where Decreasing: $(-\infty, -5) \cup (-4, \infty)$

Intervals Where Increasing: $(-5, -4)$

Intervals Where Concave Up: $(-\infty, -4.5)$

Intervals Where Concave Down: $(-4.5, \infty)$

Relative Minima: -5

Relative Maxima: -4

Name : _____

Score : _____

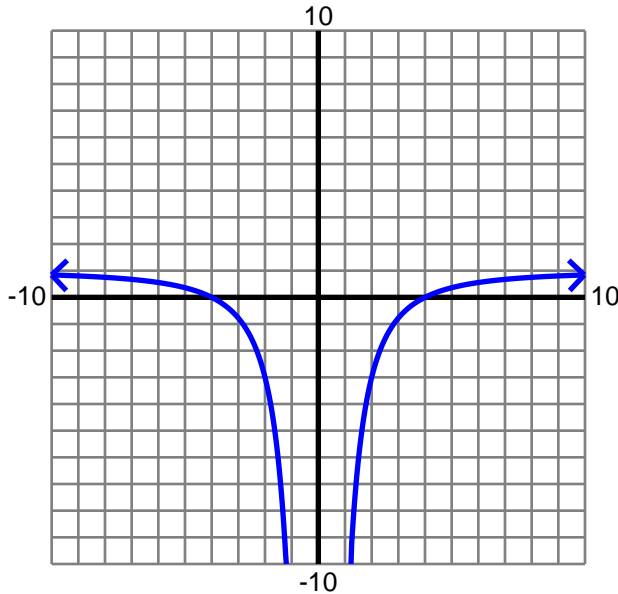
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

5) $f(x) = \frac{x(x^2-16)}{x^3}$



X-intercepts: -4, 4

Y-intercept: None

X-Values of Critical Points: None

X-Values of Inflection Points: None

Intervals Where Decreasing: $(-\infty, 0)$

Intervals Where Increasing: $(0, \infty)$

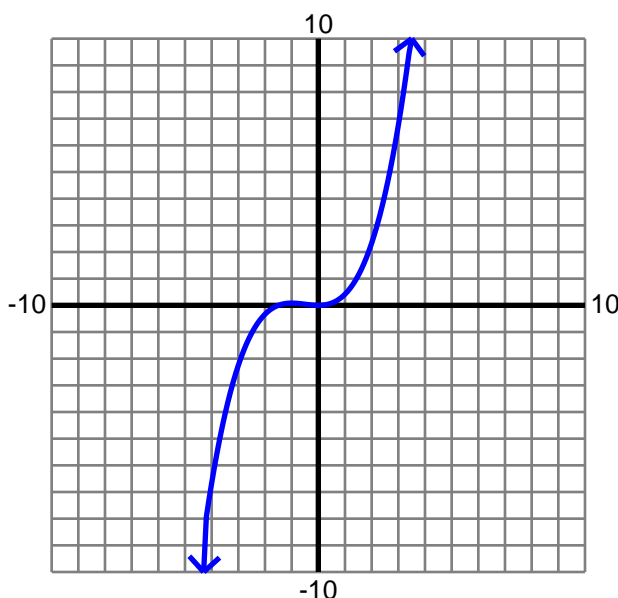
Intervals Where Concave Up: Never

Intervals Where Concave Down: Always

Relative Minima: None

Relative Maxima: None

6) $f(x) = \frac{1}{6}x^3 + \frac{1}{4}x^2$



X-intercepts: $0, -\frac{3}{2}$

Y-intercept: 0

X-Values of Critical Points: -1, 0

X-Values of Inflection Points: -0.5

Intervals Where Decreasing: $(-1, 0)$

Intervals Where Increasing: $(-\infty, -1) \cup (0, \infty)$

Intervals Where Concave Up: $(-0.5, \infty)$

Intervals Where Concave Down: $(-\infty, -0.5)$

Relative Minima: 0

Relative Maxima: -1

Name : _____

Score : _____

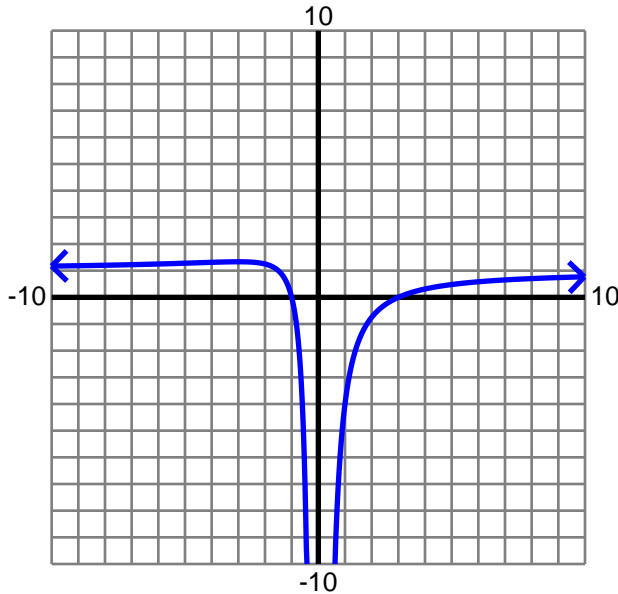
Teacher : _____

Date : _____

Graphing Functions

Fill in the properties of each function. Then, graph it.

7) $f(x) = \frac{x(x+1)(x-3)}{x^3}$



X-intercepts: -1, 3

Y-intercept: None

X-Values of Critical Points: -3

X-Values of Inflection Points: $-\frac{9}{2}$

Intervals Where Decreasing: (-3, 0)

Intervals Where Increasing: $(-\infty, -3) \cup (0, \infty)$

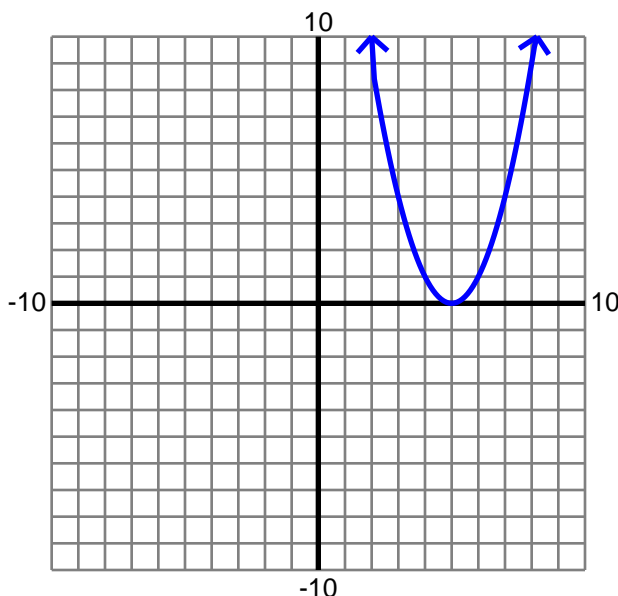
Intervals Where Concave Up: $(-\infty, -\frac{9}{2}) \cup (0, \infty)$

Intervals Where Concave Down: $(-\frac{9}{2}, 0)$

Relative Minima: None

Relative Maxima: -3

8) $f(x) = x^2 - 10x + 25$



X-intercepts: 5,5

Y-intercept: 25

X-Values of Critical Points: 5

X-Values of Inflection Points: None

Intervals Where Decreasing: $(-\infty, 5)$

Intervals Where Increasing: $(5, \infty)$

Intervals Where Concave Up: Always

Intervals Where Concave Down: Never

Relative Minima: 5

Relative Maxima: None