Extrema:
List all local and absolute minima and maxima

Local Extrema:
List just the maxima and minima on the interior of the graph

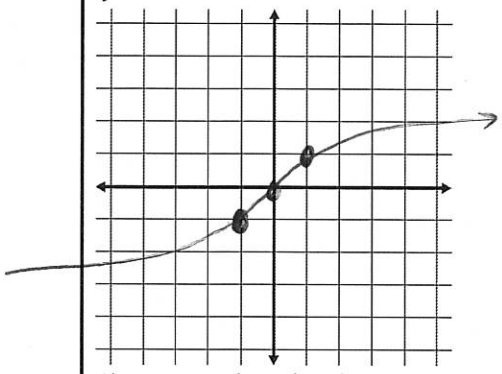
End Behavior:

$\lim_{x\to\infty} f(x) =$

$\lim_{x\to-\infty} f(x) =$

Sketch a graph of the following functions

$y = \sqrt[3]{x}$



1) Determine the domain and range

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

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

2) Is the function even, odd or undefined for $x < 0$

odd

3) Intervals of Increase or Decrease

Inc $(-\infty, \infty)$

4) Find any extrema.

None

5) Determine the end behavior

$\lim_{x\to\infty} f(x) = \infty$

$\lim_{x\to-\infty} f(x) = -\infty$

6) Find any asymptotes

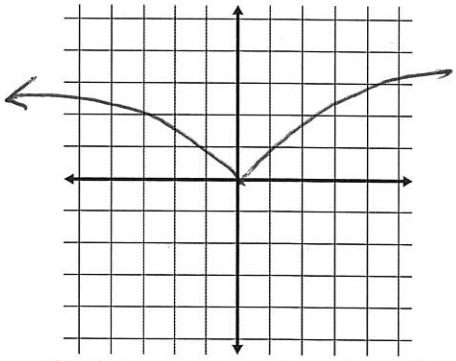
None

7) Intervals of Concavity

up $(-\infty, 0)$

down $(0, \infty)$

$y = x^{2/3}$



1) Determine the domain and range

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

R: $[0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

even

3) Intervals of Increase or Decrease

Dec $(-\infty, 0)$

Inc $(0, \infty)$

4) Find any extrema.

Abs Min (Local)

$(0, 0)$

5) Determine the end behavior

$\lim_{x\to\pm\infty} f(x) = \infty$

6) Find any asymptotes

None

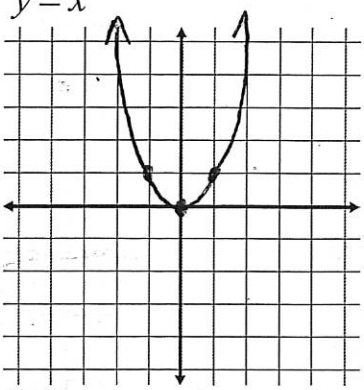
7) Intervals of Concavity

down $(-\infty, 0)$

$(0, \infty)$

Sketch a graph of the following functions

$y = x^4$



1) Determine the domain and range

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

R: $[0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

even

3) Intervals of Increase or Decrease

Dec $(-\infty, 0)$

Inc $(0, \infty)$

4) Find any extrema.

Abs/Local min

$(0, 0)$

5) Determine the end behavior

$\lim_{x \to \pm\infty} f(x) = \infty$

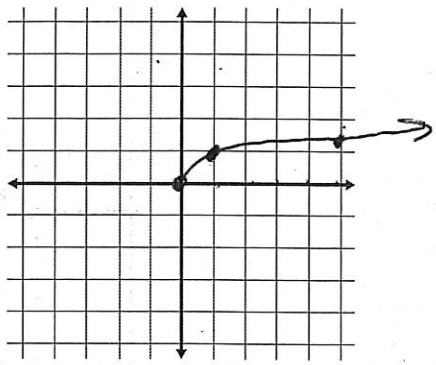
6) Find any asymptotes

None

7) Intervals of Concavity

Up $(-\infty, \infty)$

$y = \sqrt[4]{x}$



1) Determine the domain and range

D: $[0, \infty)$

R: $[0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

Undefined for $x < 0$

3) Intervals of Increase or Decrease

Inc $(0, \infty)$

4) Find any extrema.

Abs/Local min $(0, 0)$

5) Determine the end behavior

$\lim_{x \to 0^+} f(x) = 0$

$\lim_{x \to \infty} f(x) = \infty$

6) Find any asymptotes

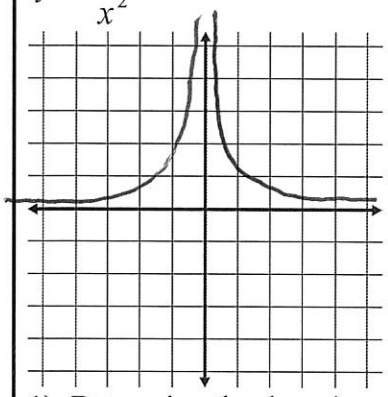
None

7) Intervals of Concavity

down $(0, \infty)$

Sketch a graph of the following functions

$y = \frac{1}{x^2}$



1) Determine the domain and range

D: $(-\infty, 0) \cup (0, \infty)$

R: $(0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

even

3) Intervals of Increase or Decrease

Inc $(-\infty, 0)$

Dec $(0, \infty)$

4) Find any extrema.

None

5) Determine the end behavior

$\lim_{x \to \pm\infty} f(x) = 0$

6) Find any asymptotes

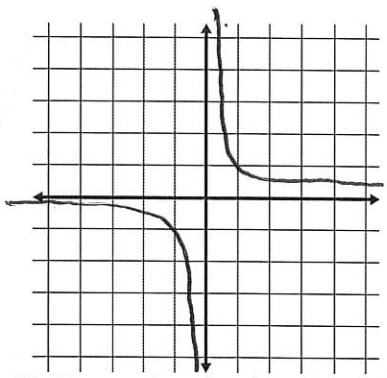
$y = 0$ (x-axis)

$x = 0$ (y-axis)

7) Intervals of Concavity

up $(-\infty, 0) \cup (0, \infty)$

$y = x^{-3}$



1) Determine the domain and range

D: $(-\infty, 0) \cup (0, \infty)$

R: $(-\infty, 0) \cup (0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

odd

3) Intervals of Increase or Decrease

dec $(-\infty, 0) \cup (0, \infty)$

4) Find any extrema.

None

5) Determine the end behavior

$\lim_{x \to \pm\infty} f(x) = 0$

6) Find any asymptotes

$y = 0$ (x-axis)

$x = 0$ (y-axis)

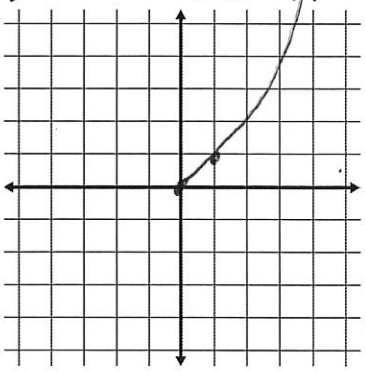
7) Intervals of Concavity

Down $(-\infty, 0)$

up $(0, \infty)$

Sketch a graph of the following functions

$y = x^{3/2} = \sqrt{x^3}$



1) Determine the domain and range

D: $[0, \infty)$

R: $[0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

undefined for $x < 0$

3) Intervals of Increase or Decrease

Inc $(0, \infty)$

4) Find any extrema.

Local/Abs $(0, 0)$

Min

5) Determine the end behavior

$\lim_{x \to 0^+} f(x) = 0$

$\lim_{x \to \infty} f(x) = \infty$

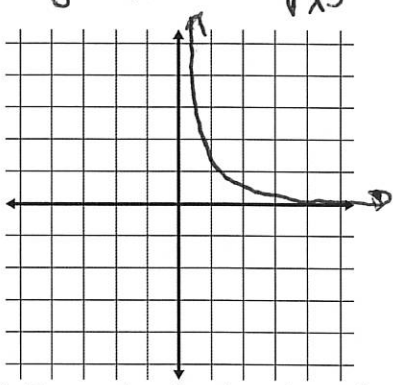
6) Find any asymptotes

None

7) Intervals of Concavity

up $(0, \infty)$

$y = x^{-3/2} = \frac{1}{\sqrt{x^3}}$



1) Determine the domain and range

D: $(0, \infty)$

R: $(0, \infty)$

2) Is the function even, odd or undefined for $x < 0$

und for $x < 0$

3) Intervals of Increase or Decrease

Dec $(-\infty, 0)$

4) Find any extrema.

None

5) Determine the end behavior

$\lim_{x \to 0^+} f(x) = \infty$

$\lim_{x \to \infty} f(x) = 0$

6) Find any asymptotes

$y = 0$ (x-axis)

$x = 0$ y-axis

7) Intervals of Concavity

up $(0, \infty)$