

Key

Interpreting Function Graphs

Intervals

Increasing $(-\infty, -1), (3.5, \infty)$
 Decreasing $(-1, 3.5)$

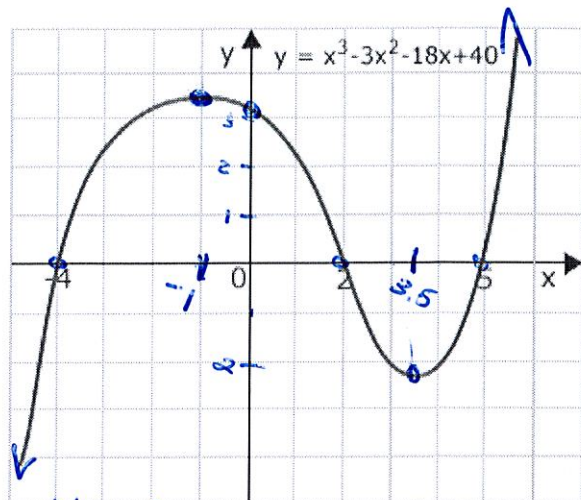
Intercepts

X Intercepts $(-4, 0), (2, 0), (5, 0)$
 Y Intercepts $(0, 3)$

Min/Max

Relative Maximums $(-1, 3.5)$
 Relative Minimums $(3.5, -2.1)$

End Behavior as $x \rightarrow -\infty, y \rightarrow -\infty$, as $x \rightarrow \infty, y \rightarrow \infty$



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

Intervals

Increasing $(-0.5, 1.5), (2.5, \infty)$
 Decreasing $(-\infty, -0.5), (1.5, 2.5)$

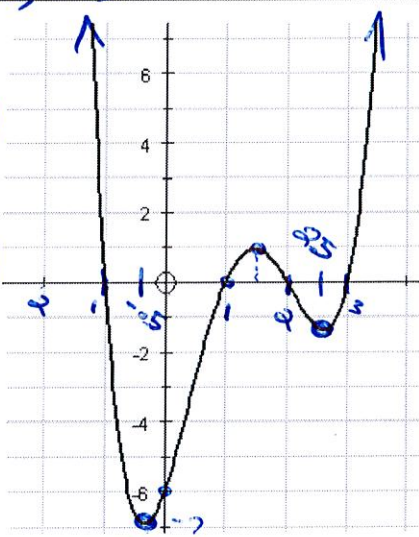
Intercepts

X Intercepts $(-1, 0), (1, 0), (2, 0), (3, 0)$
 Y Intercepts $(0, -6)$

Min/Max

Relative Maximums $(1.5, 1)$
 Relative Minimums $(-0.5, -7)$

End Behavior as $x \rightarrow -\infty, y \rightarrow +\infty$
 as $x \rightarrow \infty, y \rightarrow +\infty$



Domain $(-\infty, \infty)$ Range $(-7, \infty)$

Intervals

Increasing $(-\infty, -0.5), (0.6, 2.5)$
 Decreasing $(-0.5, 0.6), (2.5, \infty)$

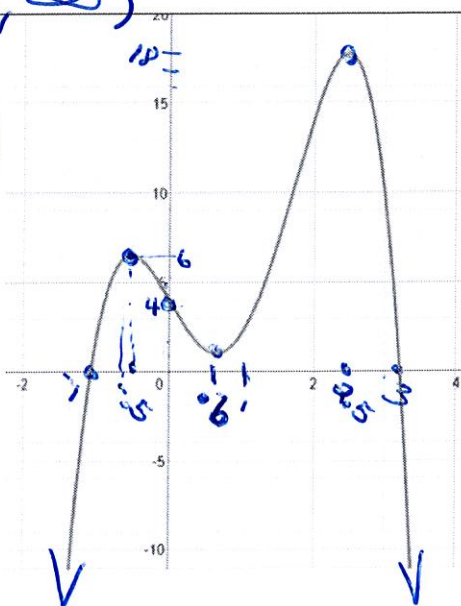
Intercepts

X Intercepts $(-1, 0), (3, 0)$
 Y Intercepts $(0, 4)$

Min/Max

Relative Maximums $(-0.5, 6), (2.5, 18)$
 Relative Minimums $(0.6, 1)$

End Behavior as $x \rightarrow -\infty, y \rightarrow -\infty$
 as $x \rightarrow \infty, y \rightarrow -\infty$



Domain $(-\infty, \infty)$ Range $(-\infty, 18)$

Vocabulary

DECREASING INTERVAL	working from left to right x values for which y is decreasing
DEPENDANT VARIABLE	y the value of y depends on the x value of the function
DOMAIN	interval of x values for which the function $f(x)$ is defined
END BEHAVIOR	Look at the far ends of the graph written as • $x \rightarrow -\infty$ $y \rightarrow$ "something", $x \rightarrow \infty$ $y \rightarrow$ "something"
INCREASING INTERVAL	working from left to right x values for which y is increasing
INDEPENDENT VARIABLE	x
INTERCEPTS (X and Y)	where the graph crosses the x axis \Rightarrow x intercept y axis \Rightarrow y intercept
RANGE	interval of y values for which the function $f(x)$ is defined
RELATIVE MAXIMUM	peak's in the function graph (x, y)
RELATIVE MINIMUM	valleys in the function graph (x, y)