

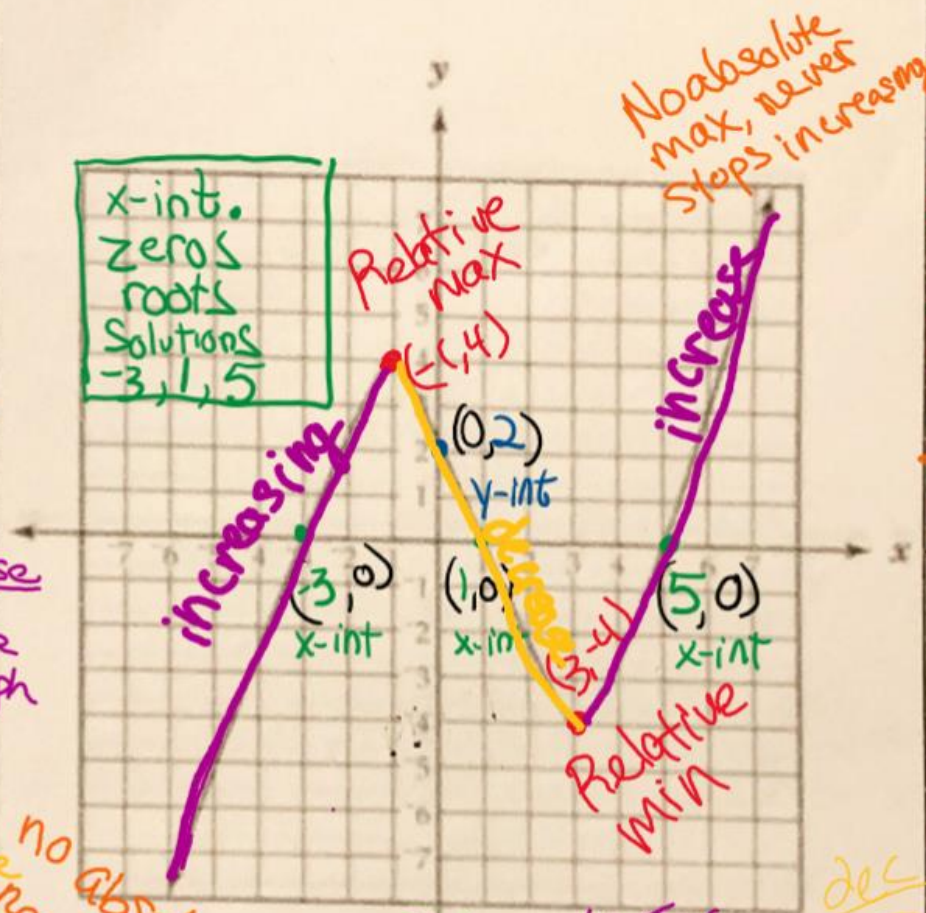
The x-intercept:

The point where the graph crosses the x-axis.

y-intercept:

The point where the graph crosses the y-axis.

x-int.
zeros
roots
Solutions
-3, 1, 5



Relative max+min
highest (max) and lowest (min) in a particular area of the graph (peaks and valleys)
Absolute max+min
absolutely highest + lowest part of the graph

Interval of increase

The x-values of the graph where the graph is rising from left to right.

Interval of decrease

x-values of the graph where the graph is falling from left to right.

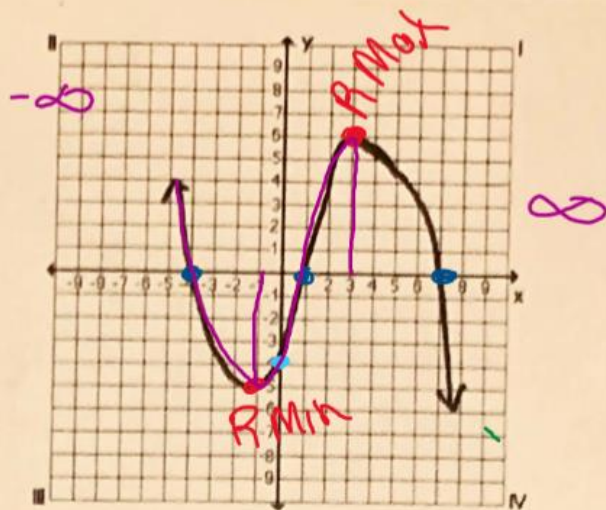
no absolute min
never stops decreasing

Intervals Inc.
 $(-\infty, -1]$
 $[3, \infty)$

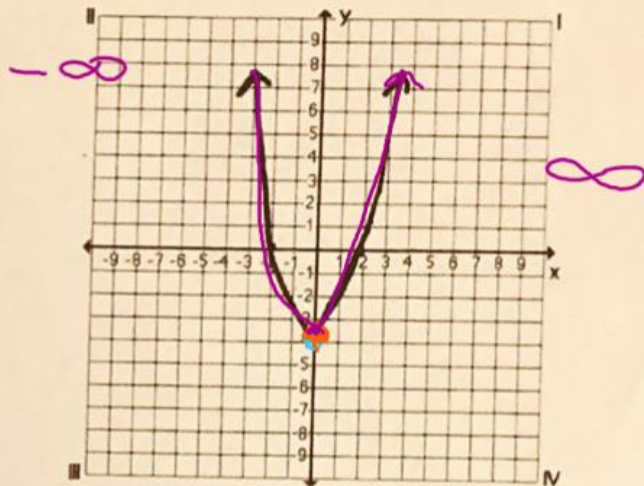
dec
 $[-1, 3]$

Name: _____

← →
Domain $(-\infty, \infty)$
↓ ↑
Range $(-\infty, \infty)$
Zero(s) $(-4, 0)$ $(1, 0)$ $(7, 0)$
Y-intercept $(0, -4)$
Relative Maximum $(3, 6)$
Relative Minimum $(-1, -5)$
Absolute Maximum None
Absolute Minimum None
Int. of Increasing $[-1, 3]$
Int. of Decreasing $(-\infty, -1] [3, \infty)$



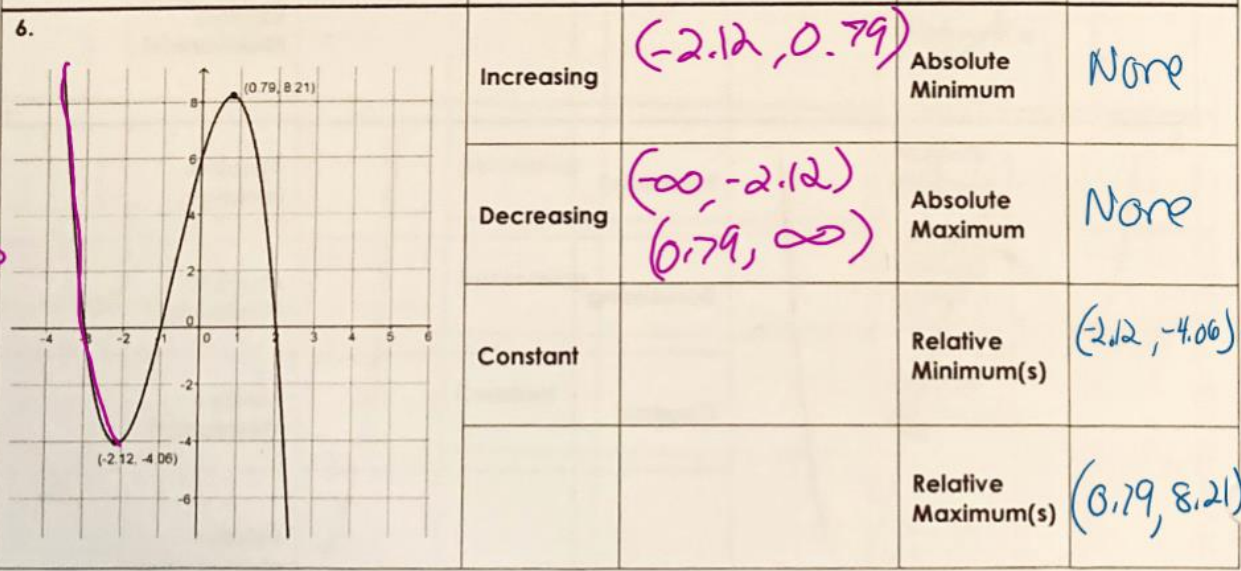
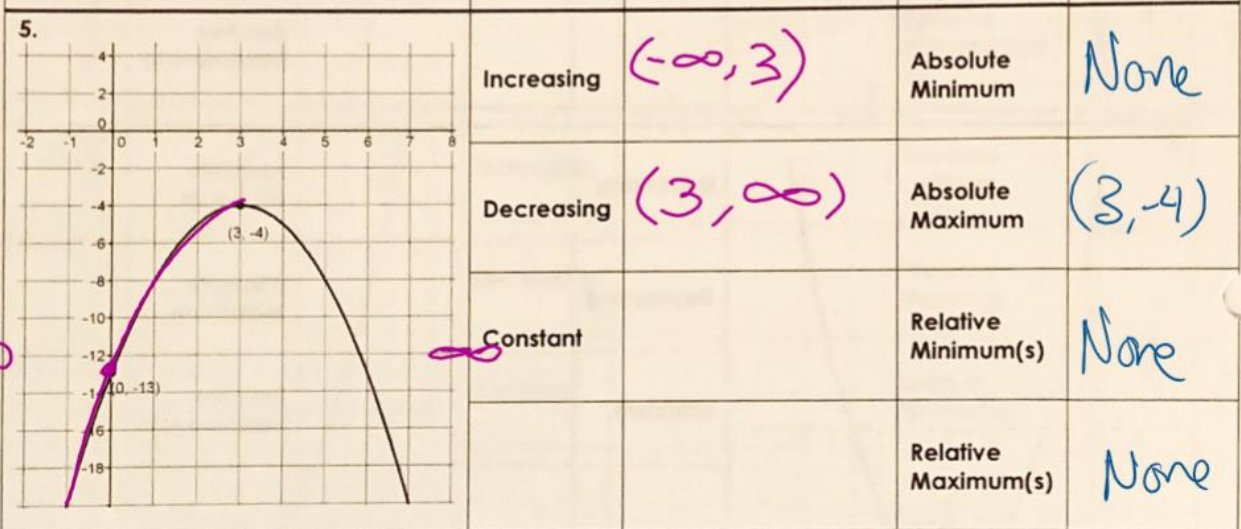
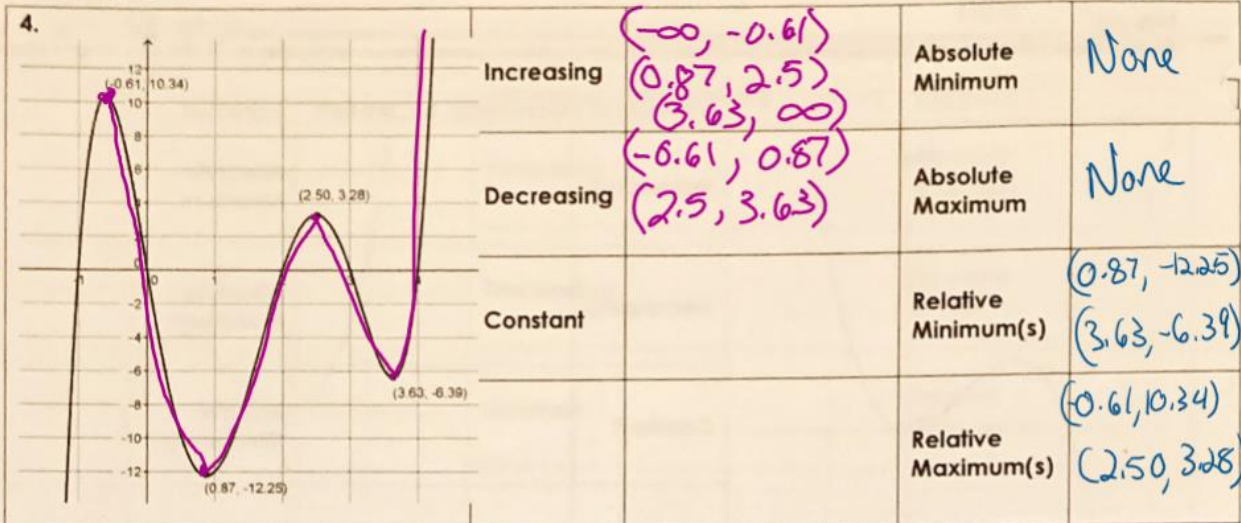
Domain $(-\infty, \infty)$
Range $[-4, \infty)$
Zero(s) $(-2, 0)$ $(2, 0)$
Y-intercept $(0, -4)$
Relative Maximum None
Relative Minimum None
Absolute Maximum None
Absolute Minimum $(0, -4)$
Int. of Increasing $[0, \infty)$
Int. of Decreasing $(-\infty, 0]$



Name _____

Date _____

		Increasing, Decreasing, & Constant		Extremas	
<p>1.</p>	Increasing	$(-\infty, -1.33]$ $[0, \infty)$	Absolute Minimum	None	
	Decreasing	$[-1.33, 0]$	Absolute Maximum	None	
	Constant		Relative Minimum(s)	$(0, 0)$	
			Relative Maximum(s)	$(-1.33, 1.19)$	
<p>2.</p>	Increasing	$(-\infty, 3]$	Absolute Minimum	$(3, -4)$	
	Decreasing	$[3, \infty)$	Absolute Maximum	None	
	Constant		Relative Minimum(s)	None	
			Relative Maximum(s)	None	
<p>3.</p>	Increasing	$[-1, 0.219]$ $[2.28, \infty)$	Absolute Minimum	$(2.28, -9.91)$	
	Decreasing	$(-\infty, -1]$ $[0.219, 2.28]$	Absolute Maximum	None	
	Constant		Relative Minimum(s)	$(-1, 0)$	
			Relative Maximum(s)	$(0.219, 3.227)$	



Name: _____

Date: _____

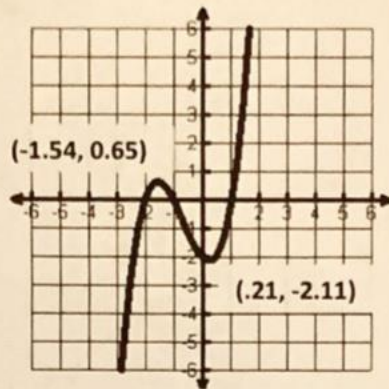
1. $f(x) = x^3 + 2x^2 - x - 2$

Rel. Max: _____ Rel. Min: _____

Abs. Max: _____ Abs. Min: _____

Inc: _____ Dec: _____

Domain: _____ Range: _____



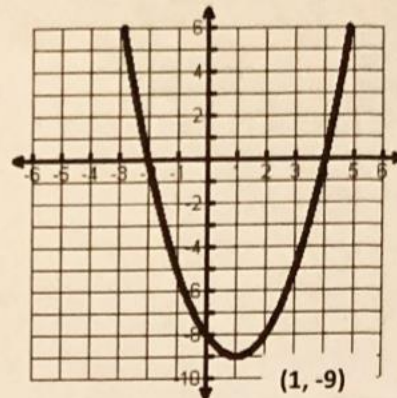
2. $f(x) = x^2 - 2x - 8$

Rel. Max: _____ Rel. Min: _____

Abs. Max: _____ Abs. Min: _____

Inc: _____ Dec: _____

Domain: _____ Range: _____



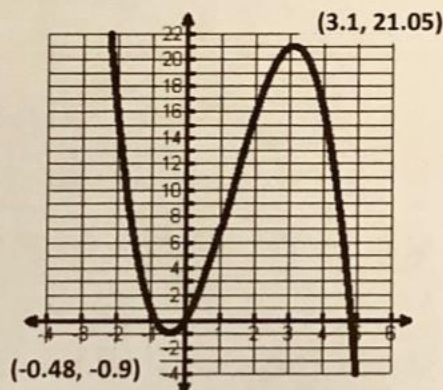
3. $f(x) = -x^3 + 4x^2 + 4x$

Rel. Max: _____ Rel. Min: _____

Abs. Max: _____ Abs. Min: _____

Inc: _____ Dec: _____

Domain: _____ Range: _____



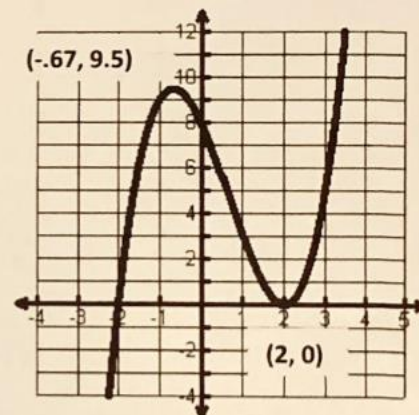
4. $f(x) = x^3 - 2x^2 - 4x + 8$

Rel. Max: _____ Rel. Min: _____

Abs. Max: _____ Abs. Min: _____

Inc: _____ Dec: _____

Domain: _____ Range: _____



Name: _____

Date: _____

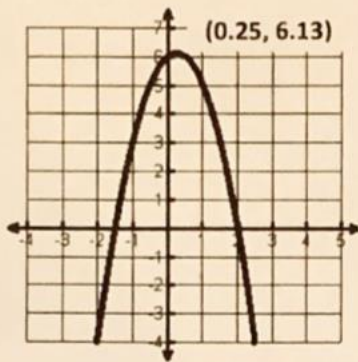
5. $f(x) = -2x^2 + x + 6$

Rel. Max: _____ Rel. Min: _____

Abs. Max: _____ Abs. Min: _____

Inc: _____ Dec: _____

Domain: _____ Range: _____



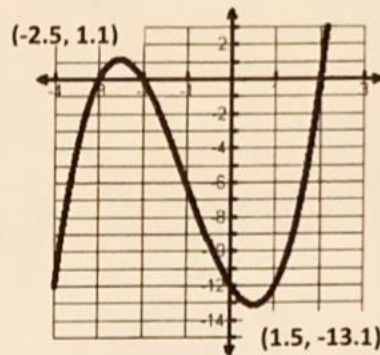
6. $f(x) = x^3 + 3x^2 - 4x - 12$

Rel. Max: _____ Rel. Min: _____

Abs. Max: _____ Abs. Min: _____

Inc: _____ Dec: _____

Domain: _____ Range: _____



Identify the y-intercept and the # of zeros

7. $f(x) = x^3 - 16$

Y-Int: _____ # of Zeros: _____

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

Y-Int: _____ # of Zeros: _____

9. $f(x) = 9x^4 + x^3 - 3x - 10$

Y-Int: _____ # of Zeros: _____

10. $f(x) = x^3 - x - 2$

Y-Int: _____ # of Zeros: _____

11. $f(x) = 7x$

Y-Int: _____ # of Zeros: _____

12. $f(x) = -2x^3 + 7$

Y-Int: _____ # of Zeros: _____