

Chapter 6 Review

Let me know if you have any questions! Hand it in when you are done.

Function	How many x-intercepts?	Determine the y-intercept	Domain	Range	End Behavior	Turning Points
$y = 4x + 10$						
$y = -3x^2 + 5x - 7$						
$y = 5x^3 - 7x^2 + 6x + 3$						

Determine the leading coefficient, degree, constant term and what type of polynomial for the following:

$$y = 4x + 10:$$

$$y = -3x^2 + 5x - 7$$

$$y = 5x^3 - 7x^2 + 6x + 3$$

$$Y=10$$

Sketch a graph for a possible polynomial function given the following characteristics:

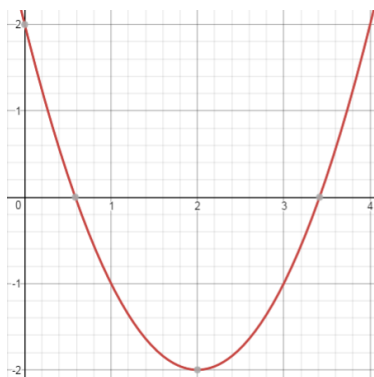
There are 3 x-intercepts, a y-intercept at -5 and the end behavior is: Starts in 3 ends in 1.

Write an equation for a polynomial function that satisfies the following set of characteristics:

Degree 1, increasing function, slope of 4 and y-intercept of -2.

Match each graph to the polynomial function.

1.



2.



3.



- a. $y = x^2 - 4x + 2$
- b. $y = 5x - 2$

c. $x^3 - 2x^2 - 7x + 2$

Round all of the answers to three decimal places.

Using a graphing calculator, determine the equation of the linear regression function for the following data:

x	1	4	7	10	13
Y	-4	-2	0	2	4

Describe the trend in the data.

Determine the y value when the x value is 8.

Approximate the x value when the y value is 7.

A pebble falls from a Cliffside into a river 40m below. This table gives the height of the pebble as it falls.

Time (s)	0	0.5	1.0	1.2	1.5	2
Height (m)	40.00	38.77	35.11	32.97	28.98	20.42

- Use technology to create a scatter plot, and use the quadratic regression to determine the equation of the curve of best fit.
- Use your equation to determine the height of the pebble after 1.25s.
- When does the pebble hit the river?