Before we begin, are there any questions from last day's work?

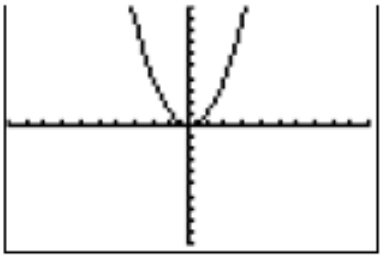
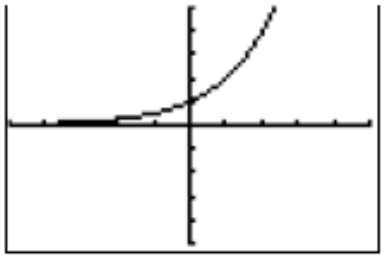
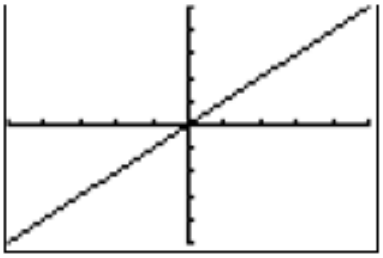
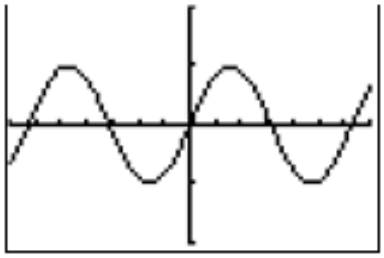
Today's Learning Goal(s):

By the end of the class, I will be able to:

a) differentiate between the following types of functions:
linear, quadratic, cubic, quartic, exponential and sinusoidal

Use Vertical White Boards?

2.4.2: Polynomial Concept Attainment Activity Date: _____

Examples	Non-Examples
$y = x$	$y = \sqrt{x}$
$y = 2x - 1$	$y = 3x^{\frac{1}{2}} - x$
$y = x(x^2 - 4)(x + 2)$	$x = -6$
$y = x^2$	$x^2 + y^2 = 16$
$y = (x - 2)^2 + 1$	$h(x) = \sqrt[3]{x}$
$y = -x^4 + \frac{1}{2}x^2 - 3$	$y = \sin\beta$
$y = -0.2(4x - 3)(x + 3)$	$y = \frac{1}{x - 2}$
$y = x^3 + 2x^2 - x + 11$	$y = 2^x$
$y = 4$	$y = \frac{x - 1}{x^2 - x + 1}$
	
	

Today's work: *Complete 2.4.3 for the 5 remaining functions.*
Complete 2.4.4
Read p.194
Complete pp. 197-198 #1, 2, 5

2.4.4: Polynomial or Not?

Date: _____

Determine if each of the following equations/graphs represents a polynomial function or not. Justify your reasoning.

a) $f(x) = 2x^3 + x^2 - 5$

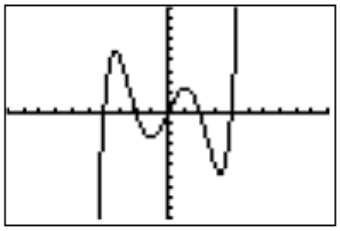
b) $f(x) = \sqrt{x+1}$

c) $f(x) = \cos x$

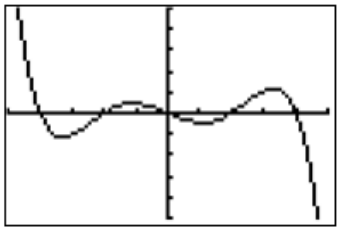
d) $f(x) = \dfrac{2}{x+3}$

e) $f(x) = x(x-1)^4$

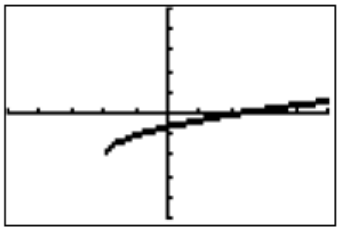
f)



g)

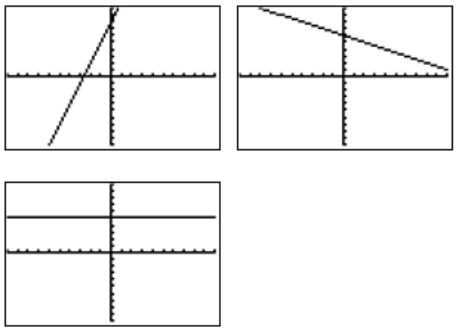


h)



pp. 197-198 1, 2, 5

2.4.3: Do you see what I see? – Sample Solutions

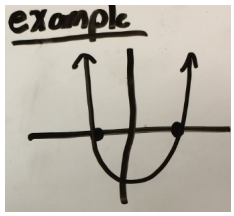
Vocabulary Term	Picture
Linear function	
Your Definition *A relation between two variables that appears as a line when graphed.* *The equation relating the two variables has degree one.*	**Real Life Connection** *The relationship between earnings and number of hours worked for a person paid per hour.* *The relationship between cost and the number of litres of gas purchased at a gas station.*

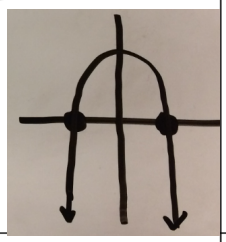
Vocabulary Term

Quadratic function

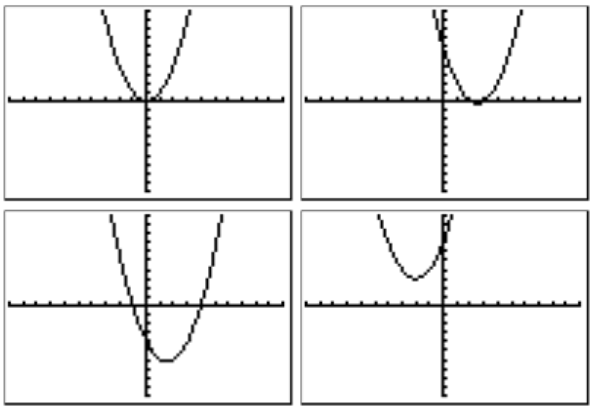
Briana

example





Picture

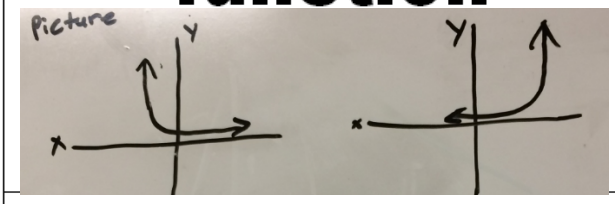
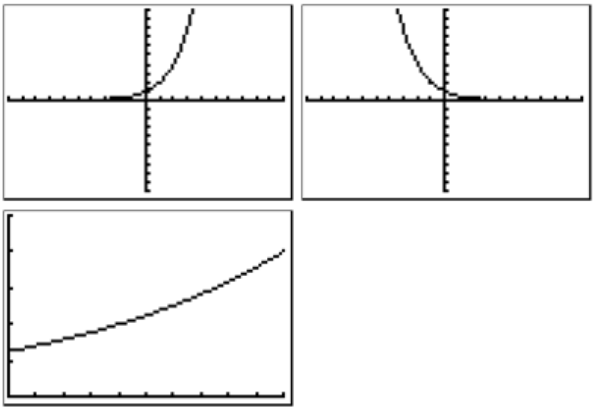
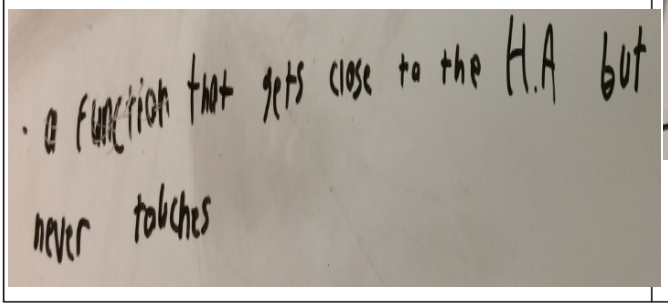
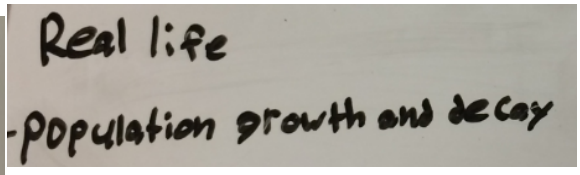


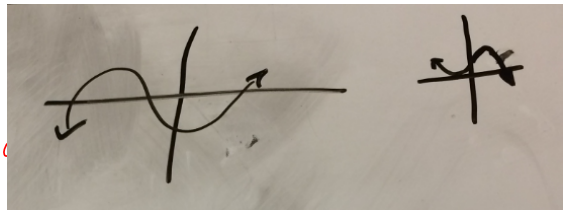
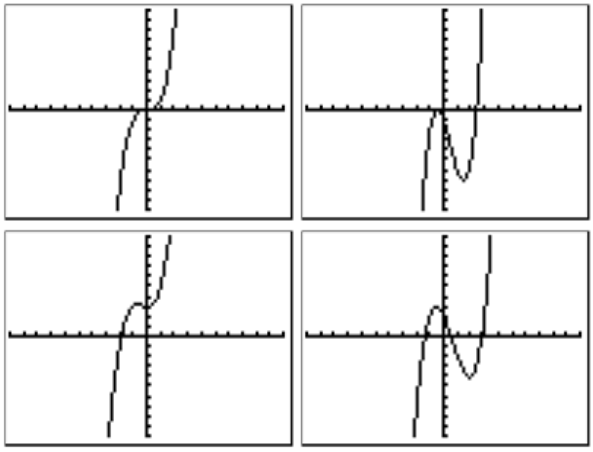
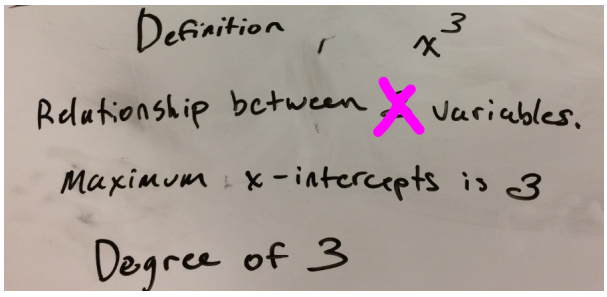
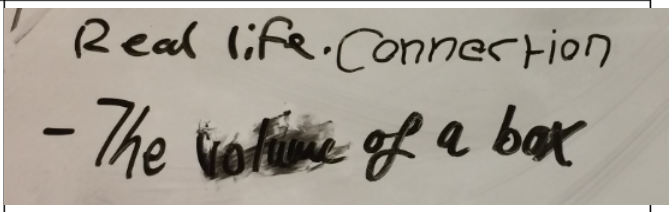
Description

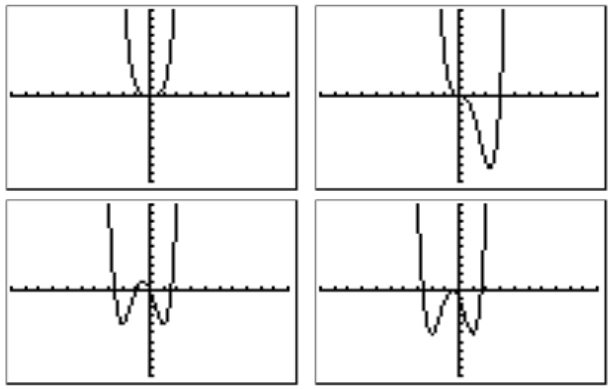
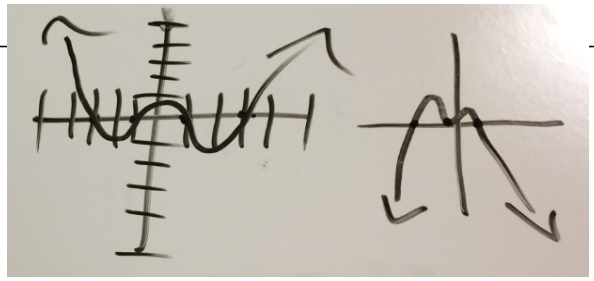
The graph will have the same end behavior. It can have a max. of two zeroes. X can be anything.

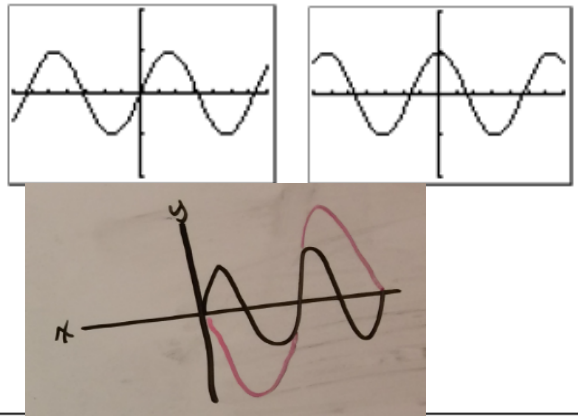
Real life example

→ Ball being thrown

Vocabulary Term	Picture
Exponential function 	
	

Vocabulary Term	Picture
Cubic function 	
Your Definition 	

Vocabulary Term	Picture
Quartic function Cole - Has an exponent of 4 - Looks like a W - Both y values will go to infinity the same way	 

Vocabulary Term	Picture
Sinusoidal function Dylan	
Your Definition	**Real Life Connection**
Repetitive wave goes above and below the centre point of the wave It can be Stretched and Compressed	Real life -Wave length -Washing Cycle