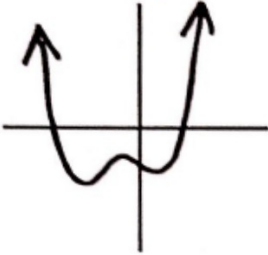
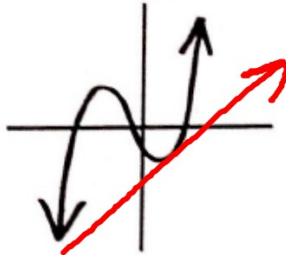
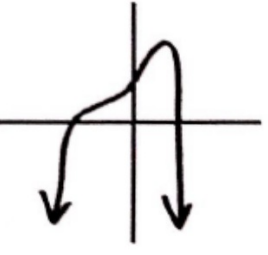
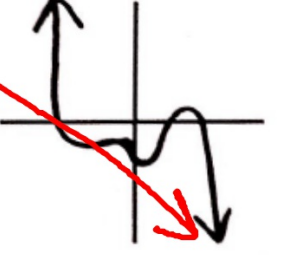


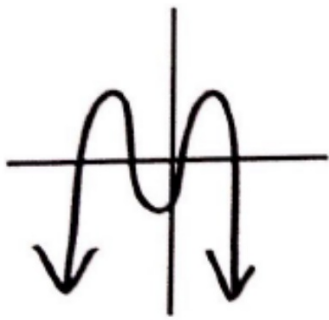
## Guided Notes: Graphs of Polynomial Functions

End Behavior

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

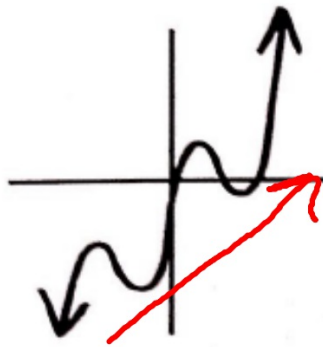
	even exponent	odd exponent
Positive		
Negative		

Example 1



negative  
even

Example 2



positive  
odd

Example 3

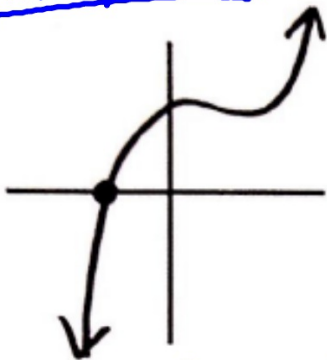


negative  
odd

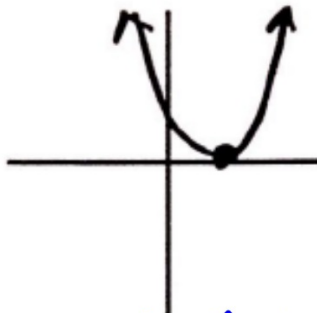
## Zeroes & Multiplicity

Zeroes: crosses the x-axis

Multiplicity: # times the zero occurs



Multiplicity 1



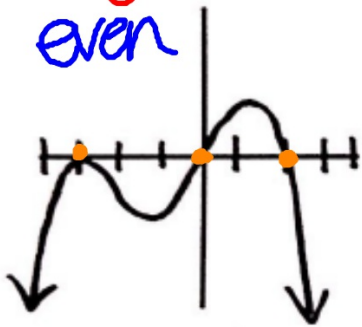
Multiplicity 2



Multiplicity 3

Example 4

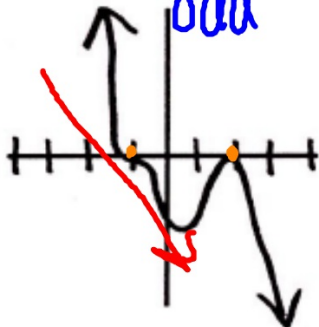
negative  
even



$x = -3$  mult. 2  
 $x = 0$  mult. 1  
 $x = 2$  mult. 1

Example 5

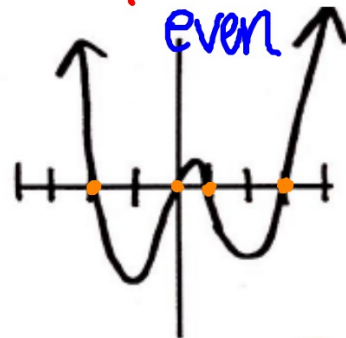
negative  
odd



$x = -1$  mult. 3  
 $x = 2$  mult. 2

Example 6

Positive  
even



$x = -2$  mult. 1  
 $x = 0$  mult. 1  
 $x = 1$  mult. 1  
 $x = 3$  mult. 1