Math 171 PreClass over Section 1.1 Name _____

Bring this worksheet to class completed fully on Tuesday, August 29, 2017.

Credit given for work shown.

This is prerequisite material that you should have seen before. If you need a quick refresher, you can reference the textbook on pages 1-9. You may also use a precalculus book or the internet.

1. In this class, we will be using both interval and inequality notation. Complete the chart.

Inequality Notation	Interval Notation	Inequality Notation	Interval Notation
$a \leq x < b$	[a,b)	$x \leq b$	
$a \leq x \leq b$		$x > a$	
$a < x \leq b$		$a < x < b$	

2. State the mathematical definition for an odd function.

3. State the mathematical definition for an even function

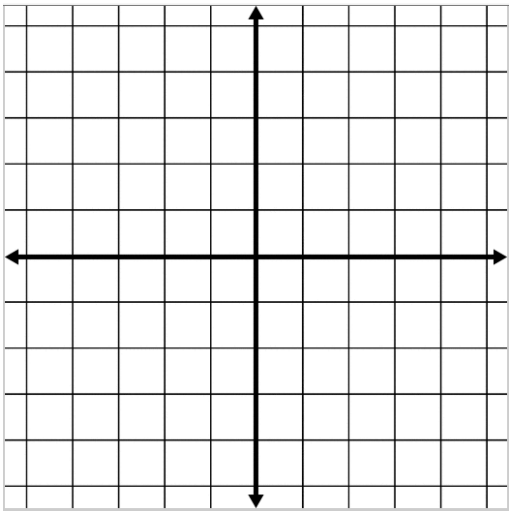
4. Consider the function: $f(x) = x^4 - 2x^2 + 1$

   (a) Find the zeros (roots) of the function.

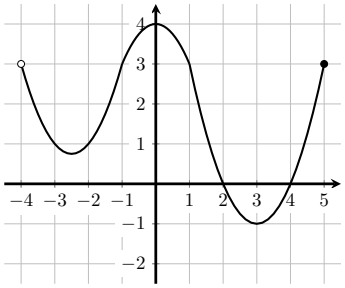
   (b) Determine if the function has even, odd or neither symmetry using the definitions.

   (c) Sketch its graph by using info from parts (a), and (b) and by plotting points. Do NOT use a calculator.

   (d) Determine if the entire function is increasing, decreasing or neither.



5. Use the graph of function f to answer the following questions.



   (a) $f(5) - f(-2) =$ _____

   (b) Domain of f: _____

   (c) Range of f: _____

   (d) x-intercept(s): _____

   (e) y-intercept(s): _____