Math 3   Name:_____
Unit 3 Day 1 HW   Date:_____

1. Fill in the missing information.

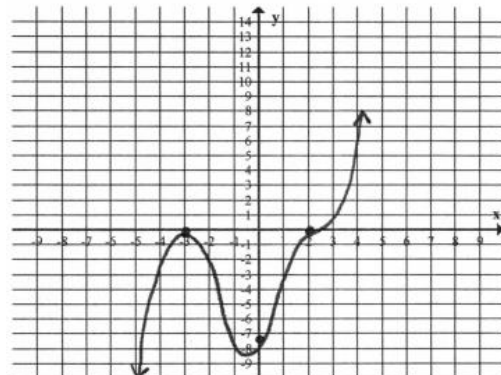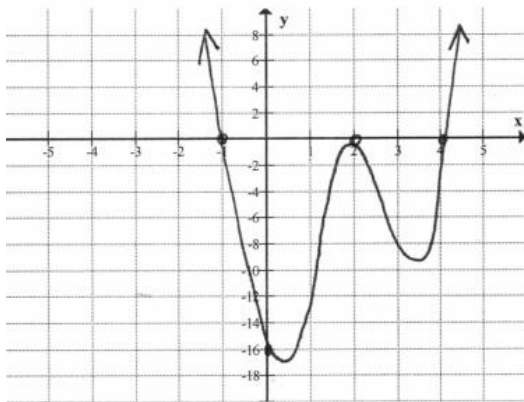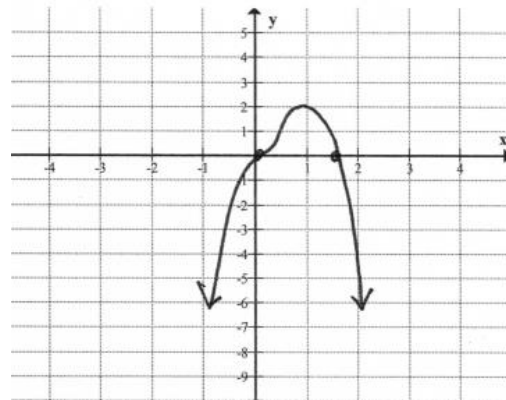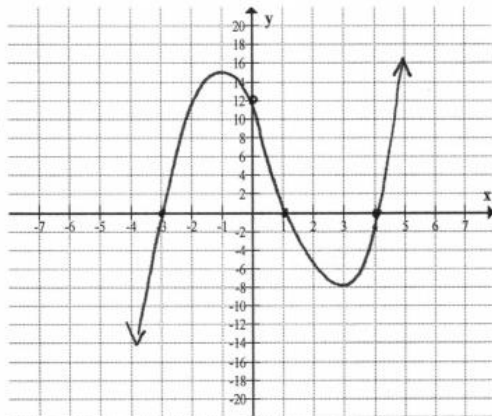| Polynomial Function	Name (degree)	Name (terms)	End Behavior
$f(x) = 3x^2 - 5$			
$y = -x^4 + 6x - 1$			
$g(x) = 6x$			
$h(x) = 5x^2 - 2x^3 + 7x - 3$			

2. Identify the zeros of each function below. Be sure to state any multiplicity.

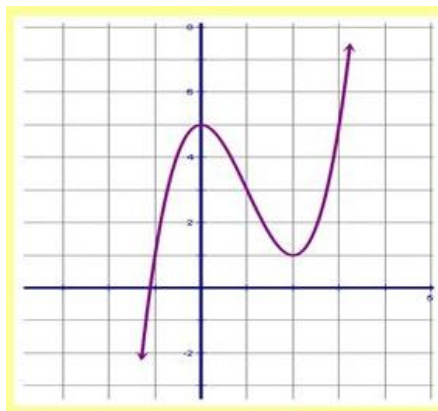3. Use the given information to complete the missing columns.
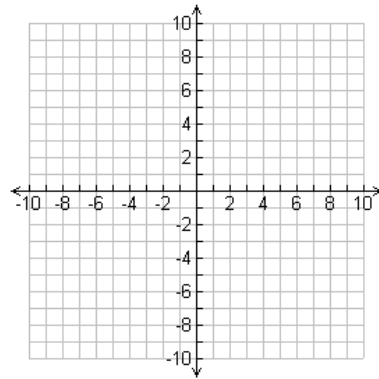
Table of Values   Graph   Key features of the function

x	y
−3	6
−2	0
−1	−4
0	−6
1	−6
2	−4
3	0
4	6

X	Y

X	Y
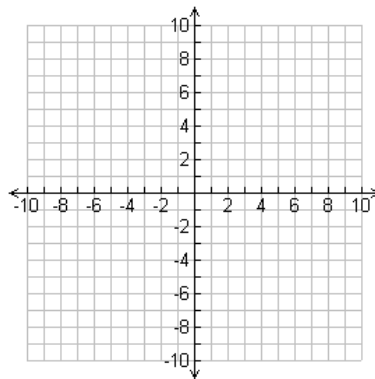
The y-intercept is (0, 7). The zeros are located at x = 4 and x = 7. There is a relative minimum at (-5.5, 1.5) and at (5.5, -2.5). A relative maximum is located at (-1, 8.5). The polynomial is quartic.

4. Given the graph, state the intervals where the graph is increasing/decreasing and where the graph is positive/negative.