

Name: _____

Date: _____

Period: _____

5.1 Polynomial Characteristics Homework

Problems 1-4, write each polynomial in standard form. Then classify it by degree and by number of terms. Simplify if necessary.

1. $5x + 3x + 7$	2. $6x^5 - 8x^2 + 3 + 2x^2$
3. $m(m - 3)^2 + 4m - 5$	4. $(b^3 - b^2 + 4) - (b^3 + b^2 - 4)$

Problems 5-8, determine the end behavior of the graph of each polynomial function. Draw a sketch of what the function **could** look like.

5. $f(x) = 4x^3 + 5x^2 - 8$	6. $f(x) = 9 - x^2 + 4x$
7. $f(x) = -2x^5 + 8x^2 - x$	8. $f(x) = 13 + 4x^6 + 7x^3$

Problems 9-10, determine the degree of the polynomial function with the given data.

9.

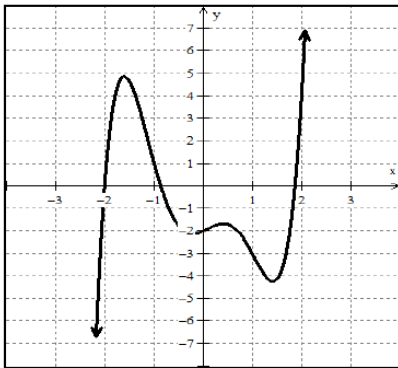
x	-2	-1	0	1	2
y	15	9	5	3	3

10.

x	-2	-1	0	1	2
y	-22	-8	-4	-4	-2

Problems 11-12, determine the sign of the leading coefficient and the degree of the polynomial function for each graph.

11.



12.

