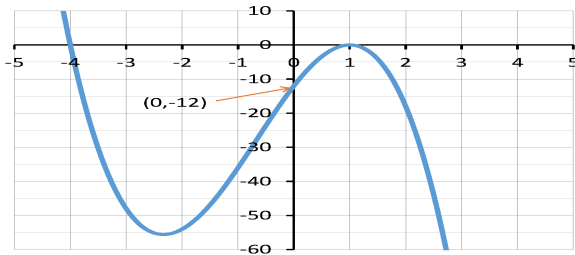
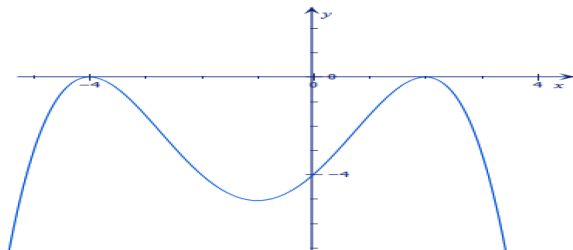


Group #: _____ Name: _____

- (15 points) How many polynomials of degree 5 having zeros -2 , -1 , 0 , 1 , 2 are there? What makes them different? List 3 of them.
- (15 points) How many polynomials of degree 5 having zeros -1 , 0 , 1 are there? What makes them different? List 3 of them.
- (15 points) Find a polynomial of degree 3 that has zeros 1 , -6 , and 4 and in which the coefficient of x is 5 .
- (15 points) Find a polynomial of degree 4 that has zeros 1 and -1 , each with multiplicity 2, and passes through the point $(2, -18)$.
- (15 points) Find a formula for the polynomial of degree 3 whose graph is given here. Be sure to show your reasoning.



- (15 points) Find a formula for the polynomial of degree 4 whose graph is given here. Be sure to show your reasoning.



- (10 points) The graph of the degree 3 polynomial, $f(x) = (x+1)(x-2)^2$, is shown here. Explain why can't the polynomial $g(x) = -2(x+1)(x-2)^2$ have such graph?

