

Name \_\_\_\_\_  
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Date \_\_\_\_\_  
Algebra II

## *Remainder Theorem Extra Review*

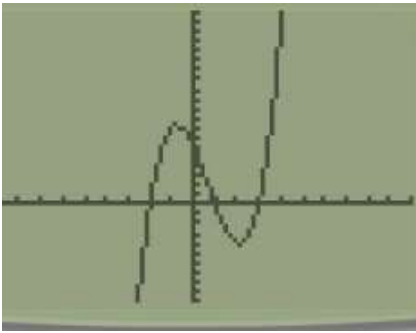
What do you need to know in order to determine the factors of a polynomial?

Write a possible polynomial equation in factored form if the zeros are:

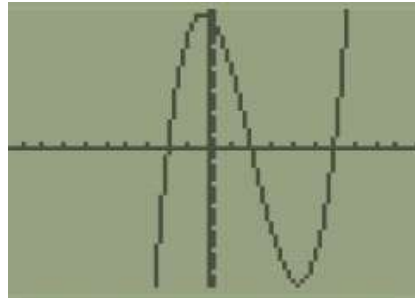
1.  $\{-4, -2, 3\}$

2.  $\{0, 1, -2, 4\}$

3.



4.



What do you need to know in order to determine the zeros of a polynomial?

State the zeros for the following polynomials

1.  $p(x) = (x + 2)(x - 4)(x + 1)$

2.  $p(x) = x(x - 6)(x + 3)$

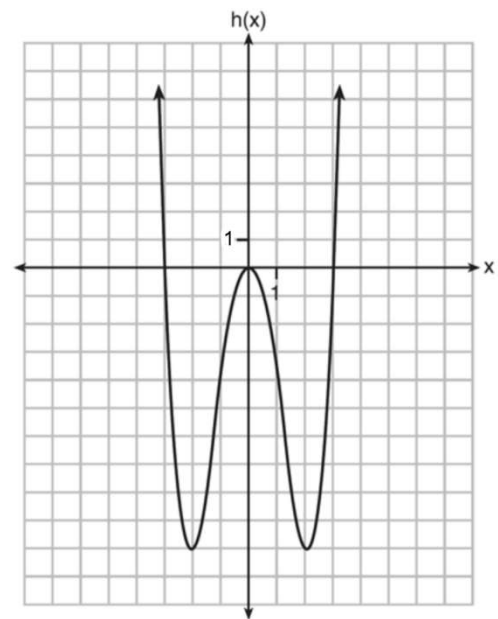
How do you find the remainder when a polynomial is divided?

1.  $p(x) = x^5 + 3x^4 - 4x^3 - 2x^2 + x - 3$   
 $g(x) = x + 9$

2.  $p(x) = -2x^4 - 3x^3 + 9x - 10$   
 $g(x) = x + 8$

3. What is the remainder when the following polynomial is divided by:

- a)  $x - 1$       b)  $x + 2$       c)  $x - 3$       d)  $x$



How do you divide polynomials?

1.  $\frac{4x^3 + 10x^2 + 10x - 1}{x - 2}$

2.  $\frac{6x^3 - 5x + 3}{x - 3}$