IB Pre HL 6E Equality

Warm Up

1. Find constants a, b, and c given that

 for all x.

2. Find constants a and b if



Example 1)  is a factor of . Find  where  and the other factors.

Example 2)  and  are factors of . Find constants a and b and all zeros of the polynomial.

6E Polynomial Theorems

1a. Find the quotient and remainder: 

b. Given , find .

**The Remainder Theorem**

When  is divided by , the remainder is \_\_\_\_\_\_\_.

**The Factor Theorem**

k is a zero of  if and only if \_\_\_\_\_\_\_ is a factor of .

**The Fundamental Theorem of Algebra**

Every polynomial of degree n has exactly \_\_\_ roots

(some may be \_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_).

2. When  is divided by , the

result is  with remainder .

When  is divided by , the remainder is 29.

When  is divided by , the remainder is -16.

Find 

3. Fully factor  if  is a factor.

Practice)

