**Polynomials Test Review Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Honors Algebra 2 Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Divide: 
2. Divide:



1. Verify that (x + 3) is a factor of 
2. Determine all of the **x-intercepts** of: 
3. Write a polynomial equation in factored form: The graph crosses the x-axis at

x = 2 and bounces at x = 5.

1. Is x = 3 a zero of 

**Factor:**

1. 
2. 25x3 + x2 - 9x - 1

**Given the following roots, write the polynomial function:**

1. 
2. 
3. 

**True or False:**

1. If a cubic polynomial has a complex zero, then it must have exactly one real zero. \_\_\_\_\_\_\_\_\_
2. A polynomial function can only have **one** x-intercept. \_\_\_\_\_\_\_\_\_
3. The **domain** of a polynomial function is always . \_\_\_\_\_\_\_\_\_
4. The **range** of a quadratic polynomial function is always . \_\_\_\_\_\_\_\_\_
5. Cubic polynomials never have an absolute minimum or maximum. \_\_\_\_\_\_\_\_\_

**Find all of the:**

1. **Roots: **

**Roots: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Factors: **

**Factors: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Zeros: **

**Zeros: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Solutions: **

**X-Ints: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**