Names: _____ _____ _____

Activity #5: Polynomials 3 **College Algebra**

1. The polynomial

$$p(x) = 2x^5 - 7x^4 - 3x^3 + 33x^2 - 35x + 10$$

has a root at $\sqrt{5}$. Completely factor $p(x)$ as a product of linear factors.

2. The polynomial

$$p(x) = 5x^5 - x^4 - 40x^3 + 8x^2 + 75x - 15$$

has a root at $\sqrt{3}$. Completely factor $p(x)$ as a product of linear factors.

3. The polynomial

$$p(x) = 5x^5 + 19x^4 + 31x^3 + 73x^2 + 44x - 12$$

has a root at $2i$. Completely factor $p(x)$ as a product of linear factors.