Names: _____ _____ _____

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

1. The polynomial

$$p(x) = 2x^5 - 3x^4 - 7x^3 + 8x^2 + 6x - 4$$

has a root at $\sqrt{2}$. Completely factor $p(x)$ as a product of linear factors.

2. The polynomial

$$p(x) = 2x^5 - x^4 - 10x^3 + 5x^2 + 12x - 6$$

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

3. The polynomial

$$p(x) = 5x^5 - 36x^4 + 77x^3 - 154x^2 + 228x - 40$$

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