Names: _____ _____ _____

Activity #8: Polynomials 3 **College Algebra**

1. The polynomial

$$p(x) = 2x^5 - 3x^4 - 13x^3 + 17x^2 + 15x - 10$$

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

2. The polynomial

$$p(x) = 5x^5 - x^4 - 35x^3 + 7x^2 + 50x - 10$$

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

3. The polynomial

$$p(x) = 3x^5 - 7x^4 - 31x^3 - 13x^2 - 172x + 60$$

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