Names: _____ _____ _____

College Algebra Activity #5: Polynomials 3

1. The polynomial

$$p(x) = 2x^5 + x^4 - 11x^3 - x^2 + 15x - 6$$

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

2. The polynomial

$$p(x) = 2x^5 - x^4 - 14x^3 + 7x^2 + 20x - 10$$

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

3. The polynomial

$$p(x) = 5x^5 + 4x^4 - 11x^3 + 22x^2 - 124x + 24$$

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