

Unit 4 Group Work 2
PCHA 2022-23 / Dr. Kessner

No calculator! Have fun!

1. Factor the following polynomial completely, both over \mathbb{R} (as a product of real linear and irreducible quadratic factors) and over \mathbb{C} (as a product of complex linear factors). Sketch the graph of the function.

$$p(x) = x^4 - 2x^3 + x^2 + 2x - 2$$

2. Factor the following polynomial completely, both over \mathbb{R} (as a product of real linear and irreducible quadratic factors) and over \mathbb{C} (as a product of complex linear factors). Sketch the graph of the function. A little bird tells you that $2 - 2i$ is a zero.

$$q(x) = x^5 - 4x^4 + 5x^3 + 14x^2 - 32x + 16$$