Math 1314 **Homework** *Sec*–2.5 ***Name***:

Determine the end behavior of the graph of the polynomial function

1. $f(x) = -5x^6 - 16x^2 - 20x + 64$

2. $f(x) = 5x^5 + 16x^2 + 20x - 64$

3. $f(x) = -5x^7 - 16x^2 - 20x + 64$

4. $f(x) = 5x^6 + 6x^2 + 2x - 6$

Use the Intermediate Value Theorem to show that each polynomial has a real zero between the given integers.

5. $P(x) = 2x^3 + 3x^2 - 23x - 42, \quad a = 1, \quad b = 2$

6. $P(x) = 4x^4 + 7x^3 - 11x^2 + 7x - 15, \quad a = -4, \quad b = -2$