

Instructions: Work the following problems in groups of 2-3 students.

1. Graph the function $f(x) = -3x^2 + 6x + 6$

2. Graph the function $g(x) = -2x(x - 1)^2(x + 2)^2$

3. Given that $f(x) = x^5 - 3x^4 + x^3 - 3x^2$, use synthetic division to find $f(-2)$ and $f(3)$

4. Find **all** roots of $g(x) = 2x^4 + 9x^3 + 5x^2 - 3x - 1$