

Basic Information

This assignment is due on Gradescope by **1:30 PM on Monday, October 26**.

Make sure you understand MHC [honor code](#) and have carefully read and understood the additional information on the [class syllabus](#). I am happy to discuss any questions or concerns you have!

A component of this class is helping you understand *why* the math you use works the way it does. To that end, make sure you show all your work as you will be graded on the *process* you use, not just your final answer. And if a question asks you to explain *why* something is true, be sure to answer that part of the question in complete sentences.

Homework will be graded for correctness, and I will point out where mistakes or errors are made. Each homework will be graded *Excellent*, *Satisfactory*, or *Unsatisfactory*. The [course rubric](#) explains more about the distinctions of these categories.

Turn-In Problems

3.1: 32

3.2: 30 (a and b only)

3.3: 2, 6, 8, 32

3.5: 4, 6 — Use the rational root test to find possible rational zeros (ignore the part about Cauchy's bound)

3.5: 14 You can use Desmos for this problem.

#10 Complete the square to write the polynomial $f(x) = 3x^2 + 9x - 4$ in vertex form.

#11 Use the quadratic formula to find the roots (if any) of the following polynomials.

(a) $-3x^2 + 4x - 1$

(b) $\frac{1}{2}x^2 + x + 4$

Additional Problems (to do on your own, not to turn in)

3.1: 31

3.2: 29 (a and b only)

3.3: 1, 3, 7, 31

3.5: 1, 5 — Use the rational root test to find possible rational zeros (ignore the part about Cauchy's bound)

3.5: 13 You can use Desmos for this problem.