Problem numbers are from Thomas’ Calculus, 13th edition. If unsure about which problem to solve, ask. Collaboration is permitted but every student must write his or her own solution; looking for solutions from external sources (books, the web, material from previous years, etc.) is prohibited.

1 Solve and turn in the following problems:

1. Find a parametrization of the osculating circle for the parabola $y = x^2$ at $x = 2$.

2 Solve but do not turn in the following problems:

Section 13.4: 1, 5, 9, 11, 21, 27
Section 13.5: 1, 3, 9, 11, 17