ACMAT117 Fall 2024
Professor Manguba-Glover
Homework 8   Name: _____

Show all work and simplify all answers before circling/boxing them. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for full credit.

Due next class. Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

(1) The height h in feet of a golf ball after t seconds is given by $h(t) = 96t - 16t^2$

    (a) Find the height of the ball after 4 seconds.

    (b) Find the maximum height of the golf ball.

(2) A farmer has 1000 feet of fence to enclose a rectangular area. What dimensions would maximize the area enclosed by the fence?

(3) Solve $x^2 + 3x + 2 = 0$

(4) Solve $x^2 - 8x + 12 = 0$

(5) Solve $x^2 - 9x + 10 = -8$

(6) Solve $4x^2 - 7x = 0$

(7) Solve $x^2 + 6x + 9 = 0$

(8) Solve $2x^2 + x = 2$

(9) Solve $16x^2 + 9 = 24x$

(10) Solve $2x^2 + 3x = 12 - 2x$