

MATH 211: 9-4 WORKSHEET

- (1) Do problem 63, 64, and 67 from Section 2.2 of the textbook (page 150).
- (2) A regular tetrahedron is the 3d shape formed by putting four equally-sized equilateral triangles together to form a pyramid. Derive a formula for the volume of a regular tetrahedron with side length s .¹

¹Hint: You'll need some geometry facts about triangles, so let me tell you them rather than ask you to figure them out on the spot.

- An equilateral triangle with side length x has area $\frac{\sqrt{3}}{4}x^2$.
- The distance from the corner of the equilateral triangle to its center is $\frac{\sqrt{3}}{3}x$.