

# Chapter 3.4: More Practicing the Chain Rule

## Calculus I

College of the Atlantic. Fall 2014

1. Take the derivative of the following functions:

(a)  $f(x) = \sqrt{4+x}$

(b)  $f(x) = \frac{4x^2}{\sqrt{4+x}}$

(c)  $f(x) = (1 + \sqrt{x^2 - 4})^{\frac{4}{3}}$

2. A spherical balloon is inflated so that its radius is increasing at a constant rate of 1 cm/s. At what rate is air being blown into the balloon when its radius is 5 cm? Be sure to give your answer with proper units.