

MATH 1500
Assignment #4
Due: Tuesday, Nov. 25th

1. (10 marks) A man has 16 m^2 of cardboard to build an open-topped box. The box will have a square base. What are the dimensions of the biggest possible such box?

2. Evaluate the antiderivatives of the following:

a) $\frac{\sqrt{x} + 3x^2 + 1}{x}$

b) $e^{x+1} + \sin x$

3. Solve the integral below by interpreting it as an area

$$\int (-\sqrt{16-x^2}) dx$$