

B3.

**MATH 1700: Test #3**

Name \_\_\_\_\_

Student Number \_\_\_\_\_

[12] 1. A solid stretches from  $x = 0$  to  $x = 3$ . The cross-sections of that solid with planes perpendicular to the  $x$ -axis and  $x$  many units away from the origin are squares of edges  $2x$  units long. Find the volume of that solid.

[13] 2.

[6] (a) Differentiate  $x \sin^{-1}(2x)$ .[7] (b) Evaluate  $\int \frac{e^x}{1 + e^{2x}} dx$ .