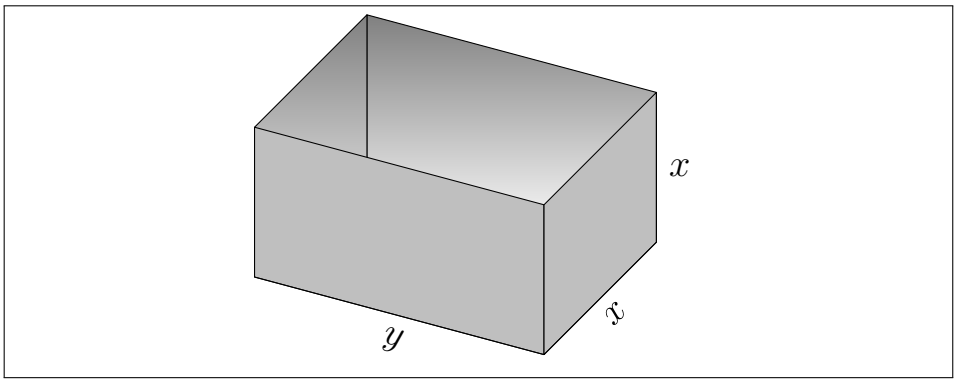
Quiz 10 Key — MA16010 — October 30, 2017

Alden Bradford

Min	Mean	Max
1	3.2	5

A box with a square side (NOT necessarily a square base) and an open top has a volume of 36 cubic feet.

1. (1 point) Sketch the box and label the dimensions with appropriate variables.



2. (1 point) Write an equation for the volume of the box in terms of your variables.

$36 = x^2 y$

3. (1 point) Write a formula for the amount of material used to make the box, in terms of your variables.

$M = 2x^2 + 3xy$

4. (2 points) Find the dimensions of the box which minimize the amount of material used.

$x = 3$, $y = 4$