$\begin{array}{c} {\rm Quiz} \ 10 \mbox{ - MA16010 \mbox{ - October 30, 2017}} \\ {\rm Alden \ Bradford} \end{array}$

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.
- 3. (1 point) Write a formula for the amount of material used to make the box, in terms of your variables.
- 4. (2 points) Find the dimensions of the box which minimize the amount of material used.