

32. The work the man has to do to climb to the top of Mt. Everest is given by $W = mgy = (73)(9.8)(8840) = 6.3 \times 10^6 \text{ J}$. Thus, the amount of butter needed is

$$m = \frac{(6.3 \times 10^6 \text{ J}) \left(\frac{1.00 \text{ cal}}{4.186 \text{ J}} \right)}{6000 \text{ cal/g}} \approx 250 \text{ g} .$$