Chapter 1   Problem 39 [†]

Solution

a) Calculate the square root, round to 3 sig figs and then cube the answer. Finally round the final answer to 3 sig figs.

$$\sqrt{3} = 1.73$$

$$(1.73)^3 = 5.18$$

b) Calculate the square root, round to 4 sig figs and then cube the answer. Finally round the final

answer to 3 sig figs.

$$\sqrt{3} = 1.732$$

$$(1.732)^3 = 5.20$$

This demonstrates that it is best not to round off on intermediate calculations. Keep at least one more

digit than you are interested in maintaining. When you are finally done, then write the answer to the appropriate number of sig figs.