1.) Assume that the maximum absolute percentage error in measuring the radius of a circle is 3%. Estimate the maximum absolute percentage error in computing the circle's
   a.) diameter.
   b.) circumference.
   c.) area.

2.) Assume that the maximum absolute percentage error in measuring the edge of a cube is 5%. Estimate the maximum absolute percentage error in computing the cube's
   a.) surface area.
   b.) volume.

3.) Use differentials to estimate the value of each of the following.
   a. \( \sqrt{103} \)
   b.) \( \sqrt{23} \)
   c.) \((28)^{1/3}\)
   d.) \((79)^{1/4}\)
   e.) \(\tan \left( \frac{\pi}{4} + 0.2 \right)\)