

Math 16A
Kouba
Worksheet 8

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.) $\tan\left(\frac{\pi}{4} + 0.2\right)$