

Accuracy and Precision Notes

Determine the appropriate unit for the situation:

-Measuring the amount of water in a pool - **volume**

- **Gallons**
- Cups
- milliliters

-Measuring the amount of water in the ocean using

- Cups
- **Kiloliters**
- Tons

-Measuring the distance it takes you to walk from Lassiter to Chick-fil-a

- **Miles**
- Centimeters
- Yards

-Measuring the weight of a mouse

- **Grams**
- Hectograms
- **Ounces**
- Cups

-Paying the drive thru bill at Wendy's

- Pennies
- \$100's
- **\$5's**

-How many decimal places does money have?

- 1
- **2**
- 3

-height of building

- **Feet**
- Inches
- Miles

$$\text{\$} | = 1.00$$

$$\text{Quarter} = .25$$

$$\text{Dime} = .10$$

$$\text{NICKEL} = .05$$

$$\text{Penny} = .01$$

$$\text{Half Dollar} = .50$$

Accuracy with Decimals and Radicals

You and your friend are debating on what the area is at your local skating rink. You know that the shape is a square and that the length and width of the rink is $\sqrt{6}$ feet. Your friend doesn't like looking at radicals and decides he is going to use the decimal number instead, which is 2.45 ft. When you debate on finding the area, who is more precise and why?

A Radical is ALWAYS more exact than a decimal

• A simplified radical always gives you an EXACT answer.

• A rounded decimal gives you a n approximated answer.

Which decimal is more precise?

- 7.5 or **7.51**
- **4.254** or 4.25
- 8 or **7.99**

→ 2 decimal places

Unless otherwise stated in the directions always round to the nearest hundredth:

1. 7.895
7.90

2. 3.2435
3.24

3. 7.761
7.76

4. 10.2366
10.24

EXACT: the most accurate or precise answer with NO rounding or guessing

ESTIMATED: Round or guess at the beginning of the problem w/o doing any mathematical calculations.

APPROXIMATED: Round at the END after mathematical calculations have been done. (\approx)