



Significant Figures - Day 2

Experimental Design Unit
Day 24
September 20th, 2006

Objectives for Day 24 Wednesday, 09/20/06

- *Calculate* the number of significant figures in given examples
- *Calculate* the number of significant figures in given examples
- *Define* the terms "accuracy" and "precision"

Let's look at some Examples...

1. **5.6543**
5 (all are significant because they are 1-9)
2. **2,600,000**
2 (the zeroes are not because they just hold the decimal point in place)
3. **2.600000 x 10⁶**
7 (all zeroes *are* significant because they are "trailing" and not holding the decimal)

Adding and Subtracting with Significant Figures

- The answer can contain no more *decimal places* than the least precise measurement
- Example:
- **2.3 + 13.5633 =**
 - **15.8633**
 - *Adjusted for Proper Significant Figures:*
 - **15.9**

Multiplying and Dividing with Significant Figures

- The answer can contain no more *Significant Figures* than the least precise measurement

Example:

- **32.3 x 3.5724 =**
- **115.38852**
- *Adjusted for Proper Significant Figures:*
- **115**

Another Example

- **30.0 x 2.0005 =**
- **60.015**
- *Adjusted for Proper Significant Figures:*
- **60.0**