Significant Digits

Rules for Significant Digits

1) Leading zero's are never significant.

2) When calculating with significant digits, the answer must have no more than the LEAST of the numbers used in calculation.

Certainty of Measurements

Measurement	Certainty
307.0 cm	
61 m/s	
0.03 m	
0.5060 km	
3.00×10^8 m/s	

Click here

Oct 17 - 3:31 PM

Certainty Rule for Multyplying and Dividing

When Multiplying or Dividing, the answer has the fewest number of significant digits as the measurement with the fewest number of significant digits.

EXAMPLE

Determine the answer to this calculation and state to the correct number of significant digits.

$3.2 \times 10.1 = 32.32 \rightarrow 32$

Dec 2-8:11 PM

Precision Rule for Adding and Subtracting

When Adding or Subtracting measured values of known precision, the answer has the answer has the same number of decimal places as the measurement with the fewest decimal places.

EXAMPLE

Determine the answer to this calculation and state to the correct precision.

$104.2 + 11 + 0.67 = 115.87$

1.2×10^2

Dec 2-8:16 PM

Unit Conversion

Often units need to be converted to other values to allow for the appropriate units for an answer.

Ex: An athlete runs a 5km race in 19.5 min. Convert the time to hours

Oct 19 - 8:29 PM

Ex: A train is travelling at 95km/h. Convert to m/s

Hwk: Read Sect 9.2, p. 349, #2-9

Oct 10-8:05 PM