


UNIT 2: MEASUREMENT

Topics Covered:

- Qualitative and Quantitative
- Dimensional Analysis
- SI System
- Scientific Notation
- Significant Figures
- Density

UNIT OBJECTIVES

- ❑ Use the SI system in taking and recording measurements in terms of significant figures, precision and accuracy
 - ❑ Understand temperature in terms of Kelvin and Celsius
 - ❑ Perform unit conversions including using scientific notation
 - ❑ Understand matter in terms of mass, volume and density
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SIGNIFICANT FIGURES

SIGNIFICANT FIGURES

The answer to “*What should I round to?*”

‘Sig Fig’:



SIGNIFICANT FIGURES

Quick geography review...



SIGNIFICANT FIGURES

Pacific/Atlantic Rule



- Start from the Pacific if...

- Start from the Atlantic if...

SIGNIFICANT FIGURES



Determine the number of sig figs in...

a. 0.000015045

f. 0.0300001

b. 4,600,000

g. 12,000

c. 2406

h. 2400.100

d. 200.00

i. 708,009,000

e. 0.000005

j. 3,650

SIGNIFICANT FIGURES



Round the following to 3 sig figs...

a. 173,792

c. 0.0003192

b. 0.0025021

d. 30.0

Round the following to 4 sig figs...

a. 249,441

c. 12,049,002

b. 0.00250122

d. 0.00200210

SIGNIFICANT FIGURES



Multiplication/Division Rule

1. Count the number of sig figs in each number
2. Do math as normal
3. Round the answer to

SIGNIFICANT FIGURES



Perform the following calculations...

a. 12.470×270

b. $36,000 \div 1245$

c. 310.0×12

SIGNIFICANT FIGURES



Perform the following calculations...

d. $129.6 \div 3$

e. 125×1.4452

f. $6000 \div 2.53$

SIGNIFICANT FIGURES



Addition/Subtraction Rule

1. Put a 'hat' over the last sig fig in each number
2. Do math as normal
3. Round the answer to

SIGNIFICANT FIGURES



Perform the following calculations...

a. $24.28 + 12.5$

b. $120,000 + 420$

c. $140,100 - 1422$

SIGNIFICANT FIGURES



Perform the following calculations...

d. $2.24 - 0.4101$

e. $12,470 + 2200.44$

f. $450 - 12.8$