8. Rounding to a Given Number of Significant Figures

(Textbook – Chapter 11)

Rules When Using Significant Figures

SIGNIFICANT = "HAS MEANING"

- A digit in a number is SIGNIFICANT if it gives an idea of quantity or accuracy
- When zeros are used to show where the decimal point is, they are NOT significant
- Zero is only significant if it is between two numbers.

Examples

How many significant figures do the following numbers have ?

(a) 308

3

(b) 3080

3

(c) 3.08

3

(d) 3.080

4 (since 0 at end shows it has been rounded.)

-> number doesn't change value if it is removed.

(e) 5.70×10^{-4}

3 since 0 at end shows it has been rounded.

- p86 Ex 11A

Rounding to a Given Number of Significant Figures

Round the following numbers to 2 significant figures:

(a) 354

$= 350$ (2 s.f)

(b) 2.398

$= 2.4$ (2 s.f)

(c) 0.14471

$= 0.14$ (2 s.f)

(d) 0.0103

$= 0.010$ (2 s.f)

p87 Ex 11B