

PARKLANDS SECONDARY SCHOOL
MATHEMATIC DEPARTMENT

GRADE 11s LESSON 2.

CLASSES: 11A, B AND L

TEACHERS: MR. MALAMBO
: ME. PHIKI

(a) To a number of decimal places

Approximation can be achieved by expressing a number to an appropriate number of decimal places.

Example

1. Round off 2.04752 to:

(a) 3 decimal places.

(b) 4 decimal places.

Solution

@ 2.04752

= 2.048 to 3 decimal places.

(b) 2.04752

= 2.0475 to 4 decimal places

Hint: Count the number of decimal places after the decimal point according to the required number of decimal places (3 d.p) 047 and apply the first two rules we discussed in ~~the~~ lesson One.

(refer to rule number 2 in the first lesson)

Significant figures.

Rules

① All non-zero digits are significant

EXAMPLE

(a) 2.567
has 4 significant figures.

(b) 48756
has 5 significant figures.

② Zeros between non-zero digits are significant.

(a) 400567

Solution

400567 has 6 significant figures.

(b) 93.05

Solution

93.05 has 4 significant figures.

③ Leading zeros to the left of non-zero digits are not significant.

EXAMPLE

(a) 0.007

Solution

0.007 has one significant figure.

④ Trailing zeros that are to the right of a decimal, are not significant.

EXAMPLE

0.0530

Solution

0.0530 has 3 significant figures.

EXERCISE

(1) Round off the following number to the number of decimal places indicated in the brackets

(a) 2.45 m (1 decimal place)

(b) 372.955 (2 decimal places).

(2) State the number of significant figures in each of the following numbers.

(a) 627000

(b) 0.0067801

(c) 24.050

(d) 90000

(3) Round off each of the following number of significant figures indicated in the brackets.

(a) 15.025 (to 4 significant figures).

(b) 2696 (to 3 significant figures).