

Unit 2 Place Value

Introduction

Learning objectives

This unit aims to give participants an understanding of

- place value for digits in numbers, including decimals
- rounding to the nearest 10, 50 or 100, etc.
- rounding to a specified number of decimal places
- rounding to a specified number of significant figures.

Facts to remember

Rounding Numbers are often rounded to the nearest 10, 50, 100, etc.

For example, 4627 rounded to the nearest 10 is 4630 as it is nearer to 4630 than to 4620;

4627 rounded to the nearest 100 is 4600 as it is nearer to 4600 than to 4700;

4627 rounded to the nearest 1000 is 5000 as it is nearer to 5000 than to 4000.

There is a convention (accepted practice) that 5 rounds UP to 10.

For example, 45 rounded to the nearest 10 is 50; 450 rounded to the nearest 100 is 500, etc.

Decimal places

For example, 6.732 written correct to 2 decimal places is 6.73; that is, there are 2 digits after the decimal point.

6.735 written correct to 2 decimal places is 6.74 as the number is rounded up.

Significant figures

For example, 757 to 2 significant figures is 760; that is, the number is rounded to the nearest 10.

757 to 1 significant figure is 800; that is, the number is rounded to the nearest hundred.

2.472 to 3 significant figures is 2.47; that is, the first 3 digits of the number are used, rounding if necessary (2.475 to 3 significant figures is 2.48).

2.472 to 2 significant figures is 2.5 and to 1 significant figure is 2.