DCU School of Mathematical Sciences

BASIC SKILLS WORKSHEET 4

Algebra II - Formulae and Transposition

The aim of this worksheet is to revise evaluating and transposing formulae.

Introduction

A major use of algebra is for writing down rules about e.g. science, economics, engineering in a concise way. For example, consider the total revenue generated by selling a certain number of cars at a certain price. We could write

$$\text{total revenue} = \text{number of cars} \times \text{price of each car}.$$

However it makes life a bit easier if we just abbreviate this by using some definitions. Let

$$T = \text{total revenue},$$
$$P = \text{price of car},$$
$$Q = \text{quantity (or number) of cars}.$$

Then we get the simple equation
$$T = PQ.$$

An equation like this which must always be true for the variables T, P, Q is called a formula.

Exercise 1

In the following examples, invent names (single letters) for the relevant quantities, and write down the formula which is described in words.

1. The average speed of a car is the distance travelled divided by the time taken.

2. The area of a rectangle is the length multiplied by the breadth.

3. Temperature in Farenheit is found by multiplying temperature in Celsius by 1.8 and then adding 32.

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