

## Order, Order!



### CALCULATOR CRUNCH



$$2 \times 100 - 60 + 40 \quad \bullet \quad 2 \times 100 - 40 + 60$$

Which symbol goes between these two expressions: < > or =

Can you use brackets to find ways where each symbol could be used? ( )

Is there more than one way to do it?

$$2 \times 100 - 60 + 40 > 2 \times 100 - 40 + 60$$

$$2 \times 100 - 60 + 40 < 2 \times 100 - 40 + 60$$

$$2 \times 100 - 60 + 40 = 2 \times 100 - 40 + 60$$

### Aim of the game

To use brackets in different places and the rules of BODMAS to change the value of an expression (a calculation without an = sign\*).

For example,  $(2 \times 100) - 60 + 40 = 180$  but  $2 \times (100 - 60) + 40 = 120$

In Year 6, children learn about BODMAS or BIDMAS which helps them to remember the order of operations:

**B** – brackets

**O/I** – indices (powers)

**D** and **M** – division and multiplication (in any order)

**A** and **S** – addition and subtraction (in any order)

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\* An expression is a collection of values and operations (+ – × ÷) which do not have an = sign.  
So  $2 \times 100 - 60 + 40$  is an expression.

The challenge is to use brackets so that each of these could be correct:

$$2 \times 100 - 60 + 40 > 2 \times 100 - 40 + 60$$

$$2 \times 100 - 60 + 40 < 2 \times 100 - 40 + 60$$

$$2 \times 100 - 60 + 40 = 2 \times 100 - 40 + 60$$

**This** > **this** means **This** 'is greater than' **this**

This < **this** means This 'is smaller than' **this**

### How to play (using a calculator)

A scientific calculator always follows the rules of BODMAS but a basic calculator will complete the calculations in the order that you enter them. You will need to use the bracket keys on both calculators to make sure that you get the answer you are expecting. It is a good idea to work the answer out in your head to make sure that the calculator is doing what you want it to!

### Challenge

Are there any that you can solve in more than one way?

### Top Tips

Remember BODMAS

Use the bracket keys on the calculator carefully

Work it out without using the calculator as well to check