

Order of Operations

Name: _____

1. Evaluate $2 + 3 \times 4 = ?$

Answer: _____

Class discussion on everyone's answers



Mathematicians made an agreement that:
multiplication takes precedence over addition.

2. Considering the agreement, which word problem below describes the arithmetic sentence $2 + 3 \times 4$

- A. You work for 3 hours babysitting and you normally get €4/hour. But this time the people tip you an extra €2. How much did you earn?
- B. A gardener decides to plant trees around the edges of a square park. He decides to plant 3 willow trees and 2 cherry blossom trees on each edge of the park. How many trees does he plant?

A or B? _____

If we want to have addition done before multiplication we use brackets: $(2 + 3) \times 4$
we always simplify inside the brackets first

3. Put brackets on the following statements to make them true.

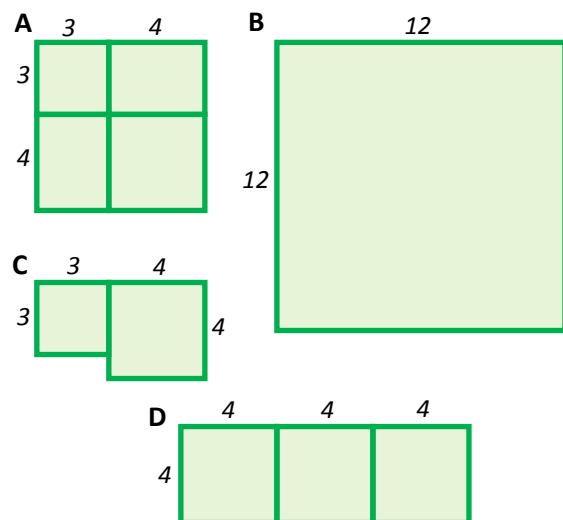
- i. $7 \times 8 + 2 = 70$
- ii. $2 + 3 \times 4 + 5 = 45$
- iii. $6 + 3 \times 2 + 5 = 23$
- iv. $3 \times 7 + 1 + 1 = 25$

4. Another operation to consider is powers. Match the numerical expressions with their corresponding area models by placing A, B, C or D into the box.

i. $3 \times 2 = \square$
 $3^2 = \square$



ii. $3^2 + 4^2 = \square$
 $3 \times 4^2 = \square$
 $(3 \times 4)^2 = \square$
 $(3 + 4)^2 = \square$



Class discussion on where powers come in the order of operations and formalise

A B I
M D
S