

Order of operations with brackets

MODULE 2 · OPERATIONS AND COMPUTATIONAL FLUENCY NUMBER

Maths has an agreed order: do **brackets first**, then **multiply and divide**, then **add and subtract** (working left to right).

→ $3 + 4 \times 2 = 3 + 8 = 11$ (not 14).

→ $(3 + 4) \times 2 = 14$ — brackets change everything.

WORK OUT $5 + 2 \times (8 - 3)$

① **Brackets first:** $8 - 3 = 5$.

② Then **multiply:** $2 \times 5 = 10$.

③ Then **add:** $5 + 10 = 15$.

HOW TO ANSWER TODAY

- **Order of operations.** Brackets first, then $\times$ and $\div$, then $+$ and $-$. Inside each group, work LEFT to RIGHT.

$3 + 2 \times 5 \rightarrow 3 + 10 = 13$ · $(4 + 2) \times 3 \rightarrow 6 \times 3 = 18$

WARM-UP

a. $47 \times 7 + 4 =$

b. $66 \times 7 + 9 =$

c. $39 + 5 \times 5 =$

d. $107 \times 9 + 9 =$

PRACTICE

- ① 5th class are heading to the Cliffs of Moher on a school tour. There are **66** pupils already on the coach, plus **9** rows of **9** seats filled by pupils from another school joining them, but **4** pupils have to stay back at the visitor centre. How many pupils are on the cliff walk in total?

- ② On sports day, 5th class start with **38** points from the morning races. They gain **5** more points in the relay, then lose **3** points in each of **3** final events. How many points does the class finish with?

SPOT THE MISTAKE

Tom works out $5 + 2 \times 3$:

$5 + 2 = 7$

$7 \times 3 = 21$

Find Tom's mistake. What is the correct answer?

REFLECT

Why is it useful that everyone agrees on the same order of operations?