

Lesson 28 **NUMBER****Order of operations: brackets, division, multiplication, addition, subtraction**

CURRICULUM ALIGNMENT

NUM.OPS.4

build upon, select and make use of a range of operation strategies.

ALG.PRR.4a

identify, explain and apply generalisations, including properties of operations, mathematical models and patterns.

INTERACTIVES Order of Operations (BIDMAS) · challenge, display, explore

WHAT THIS LESSON TEACHES

When a sum has more than one operation, follow BIDMAS order: Brackets first, then Division and Multiplication left to right, then Addition and Subtraction left to right.

→ $4 + 3 \times 2 = 10$ because multiplication comes before addition.

→ $(4 + 3) \times 2 = 14$ because the bracket is done first.

MODEL THIS ON THE BOARD

WORK OUT $(8 - 3) \times 4 + 6$

- 1 Do the brackets first: $8 - 3 = 5$
- 2 The sum is now $5 \times 4 + 6$
- 3 Next multiply: $5 \times 4 = 20$
- 4 Then add: $20 + 6 = 26$

ANSWER KEY

a) 16

b) 22

c) 9

Q1: 10

Q2: 31

Q3: 6

Q4: 37

Q5: 18

a) **Always** : BIDMAS places brackets first every time.b) **Always** : Division and multiplication come before addition and subtraction.c) **Sometimes** : True for $3 \times 4 + 2$; false for $2 + 3 \times 4$, where the order rule says multiply first.d) **Never** : Multiplication has higher priority than addition in BIDMAS.

EXTENSION SHEET · STRETCH ANSWERS

S1: 48

S2: 45

S3: 45

S4: 69

S5: 116