

WA6MNACN1

Calculating with number

Core + Challenge

Order of Operations

I can use the order of operations, including brackets, to work out and write number sentences.

Name: _____ Date: _____ Score: _____ / 56

Key idea

Work out **brackets** first.

Then do $\times$ and $\div$, working from **left to right**.

Then do $+$ and $-$, working from **left to right**.

Example: $20 - 3 \times (2 + 4) = 20 - 3 \times 6 = 20 - 18 = 2$. Circle each step as you go.

Brackets $\rightarrow \times$ and $\div$ (left to right) $\rightarrow +$ and $-$ (left to right)

$$\begin{aligned}
 &20 - 3 \times (2 + 4) \text{ brackets first} \\
 = &20 - (3 \times 6) \text{ then } \times \\
 = &(20 - 18) \text{ then } - \\
 = &2
 \end{aligned}$$

A Warm up *circle, bracket and write*

/ 16 marks

Circle the part you work out **first**. Then write the answer. 1 mark each.

1

$$8 + 4 \times 5$$

2

$$(8 + 4) \times 5$$

3

$$30 - 12 \div 3$$

4

$$50 - 8 \times 5 + 2$$

5

$$40 \div (10 - 2)$$

6

$$50 - 20 + 5$$

7

$$36 \div 6 \times 2$$

8

$$9 + 3 \times 4 - 1$$

Order of Operations · WA6MNACN1

Put in **one** pair of brackets to make each statement true. 1 mark each.

9

$$3 + 5 \times 2 = 16$$

10

$$24 \div 4 + 2 = 4$$

11

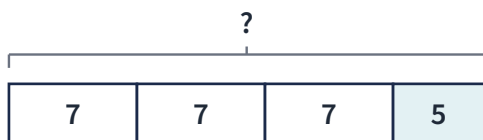
$$20 - 8 - 2 = 14$$

12

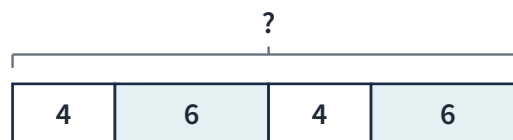
$$5 \times 6 - 4 = 10$$

Write a number sentence for each bar model. Find its value. 1 mark each.

13



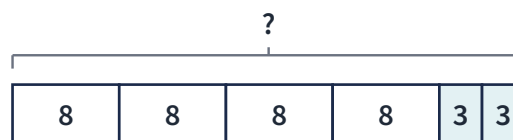
14



15



16



B

Practise *use the skill*

/ 21 marks

1

Work out $48 \div (2 + 6) \times 3 - 5$. Show **each** step on a new line. Circle the part you work out each time.

[2 marks]

= _____

= _____

= _____

= _____

Answer: _____

Order of Operations · WA6MNACN1

- 2 At the Perth Royal Show, Ella buys **3** show bags for **\$12** each. She pays with a **\$50** note. Label the bar model. Write **one** number sentence for her change, then work it out. [3 marks]

\$50			

Answer: _____

- 3 A school buys **5** boxes of **24** pencils and **3** boxes of **12** pens. Write **one** number sentence for the total number of pencils and pens. Then work it out. [2 marks]

Answer: _____

- 4 Sam had **\$80**. He bought **2** cricket balls for **\$15** each and a hat for **\$20**. Circle the number sentence that shows how much money he has left. Then work it out. [2 marks]

$$80 - 2 \times 15 + 20$$

$$80 - (2 \times 15 + 20)$$

$$(80 - 2) \times 15 - 20$$

Answer: _____

- 5 Use brackets to make each statement true. You may need **two** pairs of brackets in c). [3 marks]

a) $2 + 6 \times 5 - 1 = 39$ b) $2 + 6 \times 5 - 1 = 26$ c) $2 + 6 \times 5 - 1 = 32$

a) _____

b) _____

c) _____

6 Complete the table.

[2 marks]

Number sentence	Answer
$36 \div 4 + 5$	
$36 \div (4 + 5)$	
$36 - 12 \div 4$	
$(36 - 12) \div 4$	

7 Find the missing number in each number sentence.

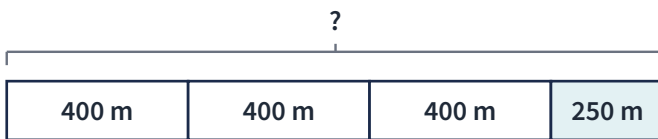
[3 marks]

a) $4 \times (\square + 3) = 36$ b) $(\square - 5) \div 3 = 7$ c) $\square \div 4 + 9 = 15$

Answer: _____

8 Ben runs **3** laps of **400 m** and then **250 m** more. Write **one** number sentence for this bar model. How far does he run?

[2 marks]



Answer: _____

9 Kai wrote: $18 - 6 \div 3 = 12 \div 3 = 4$. Explain his mistake. What is the correct answer?

[2 marks]

Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Chloe says $12 - 4 + 3 = 5$, because “you add before you subtract”. Do you agree with Chloe? Explain. [2 marks]

- 2 **True or false?** a) $20 - (8 + 2) = 20 - 8 - 2$ b) $20 - (8 - 2) = 20 - 8 - 2$ Explain why. [2 marks]

- 3 **Always, sometimes or never true?** “If a number sentence has only + and −, it does not matter which part you work out first.” Circle one. Give examples. [2 marks]

Always

Sometimes

Never

- 4 Which is the **odd one out**? $2 + 3 \times 4$, $(2 + 3) \times 4$, $20 - 3 \times 2$, $28 \div 2$ Explain. [2 marks]

- 5 Sort these into the table: $4 \times (2 + 4)$, $30 - 3 \times 2$, $(30 - 3) \times 2$, $4 \times 2 + 4$, $(10 + 2) \times 2$, $20 + 8 \div 2$. Then explain why $30 - 3 \times 2$ and $(30 - 3) \times 2$ are in different boxes. [2 marks]

	Equals 24	Does not equal 24
Has brackets		
No brackets		

D**Challenge** *stretch yourself*

/ 9 marks

- 1** **Four 4s.** Use exactly **four** 4s, any of $+$ $-$ $\times$ $\div$ and brackets to make each number. [3 marks]

a) 3 b) 5 c) 7

a) _____

b) _____

c) _____

- 2** Use the numbers **3, 5, 6** and **8** once each, with any of $+$ $-$ $\times$ $\div$ and brackets, to make **50**. Find **two** different ways. [3 marks]

Answer: _____

- 3** The Year 6 stall at the fete sells **45** cupcakes for **\$3** each and **28** lemonades for **\$2** each. Ingredients cost **\$60**. **a)** Write **one** number sentence for the profit and work it out. **b)** How many **more** cupcakes would they need to sell to make at least **\$150** profit? [3 marks]

Answer: _____

How did I go?

Warm up ___ / 16 Practise ___ / 21 Think it through ___ / 10 Challenge ___ / 9 **Total** ___ / 56

Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**