



# **Simplifying Expressions with GEMA / BEDMAS**

Mana Maths

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## Te reo Māori terms



**raupapa paheko**

order of operations

[Open in Te Aka](#)

**kīanga**

expression

[Open in Te Aka](#)

**rūnā**

simplify

[Open in Te Aka](#)

**taiapa**

bracket

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# Foundation

**1.**  $3 + 4 \times 2.$

**2.**  $5 + 6 \div 3.$

**3.**  $9 - 2 \times 4.$

**4.**  $18 \div 3 + 7.$

**5.**  $(8 + 2) \times 3.$

**6.**  $20 \div (4 + 1).$

**7.**  $7 + 3 \times 5.$

**8.**  $24 \div 6 + 8.$

**9.**  $15 - 3 \times 2.$

**10.**  $4 \times (6 - 1).$

**11.**  $(12 - 5) + 9.$

**12.**  $30 \div (3 \times 2).$

**13.**  $2 + 3 \times 4 - 1.$

**14.**  $5 \times (2 + 3) - 4.$

**15.**  $16 \div 4 + 2 \times 3.$

**16.** Which is correct:  $2 + 5 \times 3 = 21$   
or  $2 + 5 \times 3 = 17$ ?

# Proficient

1.  $14 - 3 \times 2 + 5.$

2.  $18 \div 3 \times 2.$

3.  $(9 + 7) \div 4.$

4.  $6 + 2 \times (5 - 1).$

5.  $24 \div (2 + 4) + 3.$

6.  $3 \times 4 + 18 \div 6.$

7.  $2(7 + 1) - 5.$

8.  $5 + 3^2.$

9.  $(10 - 4)^2.$

10. When  $x = 3$ ,  
simplify  $2x + 5.$

11. When  $y = 4$ ,  
simplify  $3y - 2.$

12. When  $a = 2$   
and  $b = 5$ , sim-  
plify  $a + b \times 2.$

- 13.** When  $m = 6$ , simplify  $(m + 2) \div 2$ .
- 14.** Is  $8 - 2 \times 3 = 18$  correct? Explain briefly.
- 15.** Is  $(4 + 5) \times 2 = 14$  correct? Explain briefly.
- 16.** Which is greater:  $3 + 4 \times 2$  or  $(3 + 4) \times 2$ ?

- 17.** Complete:  $12 \div 3 + 18 =$  \_\_\_\_\_ Complete:  $2 + 3 \times (6 - 2) =$  \_\_\_\_\_.

# Excellence

1. Simplify  $18 - 2 \times (3 + 4)$ .
2. Simplify  $6 + 24 \div 3 \times 2$ .
3. Simplify  $5(7 - 3) + 2^3$ .
4. Simplify  $(16 - 4) \div 3 + 5$ .
5. Simplify  $3^2 + 4 \times 5 - 6$ .
6. Simplify  $2(3 + 5) - 4 \div 2$ .
7. When  $x = 4$ , simplify  $3x + 2^2$ .
8. When  $p = 5$ , simplify  $2(p - 1) + 3$ .
9. When  $a = 3$  and  $b = 2$ , simplify  $a^2 + b \times 4$ .
10. When  $m = 8$ , simplify  $m \div 2 + 3(m - 2)$ .
11. A student says  $2 + 6 \div 3 \times 4$ . Are they correct? Explain.
12. 10A student says  $3(4 + 2) - 5 =$ . Are they correct? Explain.

**13.** A student says  $5 + 2^3 \times 2 = 24$ . Are they correct? Explain.

Which is greater:  $4(3 + 2) - 6$  or  $4 \times 3 + 2 - 6$ ? Show enough working.

Which is smaller:  $18 \div (3 + 3)$  or  $18 \div 3 + 3$ ? Explain.

**16.** Complete: if  $x = 2$ , then  $4x + 3(x + 1) = \underline{\hspace{2cm}}$ .

**17.** Complete: if  $y = 5$ , then  $2y^2 - 3y = \underline{\hspace{2cm}}$ .

**18.** Write brackets so that  $6 + 2 \times 5$  has value 40.