



Factorising double brackets (with a co-efficient equal to 1)

Mana Maths

Te reo Māori terms



whakatauwehe

factorise

Open in Te Aka

taiapa

bracket

Open in Te Aka

kaha

constant

Open in Te Aka

kīanga

expression

Open in Te Aka

Factorising double brackets (with a co-efficient equal to 1) – Foundation

1. Factorise $x^2 + 5x + 6$. Factorise $x^2 + 7x + 10$. Factorise $x^2 + 9x + 20$. Factorise $x^2 + 11x + 28$.

5. Factorise $a^2 + 8a + 15$. Factorise $a^2 + 6a + 8$. Factorise $y^2 + 3y + 2$. Factorise $y^2 + 10y + 24$.

9. Factorise $m^2 - 5m - 14$. Factorise $m^2 - 7m - 12$. Factorise $p^2 - 9p + 20$. Factorise $p^2 - 11p + 28$.

13. Fill in the blank: **14.** Fill in the blank:

$$x^2 + 8x + 15 = (x + \square)(x^2 + \square)n + 20 = (n - \square)(n - \square).$$

Factorising double brackets (with a co-efficient equal to 1) – Proficient

1. Factorise $x^2 + 12x - 20$. Factorise $x^2 + 13x - 42$. Factorise $a^2 + a - 14$. Factorise $a^2 - a - 2$

5. Factorise $y^2 + 2y - 65$. Factorise $y^2 - 4y - 21$. Factorise $m^2 + 14m + 48$. Factorise $p^2 - 13p + 42$

9. Fill in: $x^2 + 9x + 14$ **10.** $(x^2 + 5x + 6)$ **11.** $(b^2 - 1)$ **12.** $(x^2 + 11x + 24)$ **13.** $(x^2 + 7x + 12)$ **14.** $(x + 3)(x + 4)$ **15.** $(x + 1)(x + 12)$ **16.** $(x + 2)(x + 5)$.

Factorising double brackets (with a co-efficient equal to 1) – Excellence

- Factorise $x^2 - 2x - 35$.
- Factorise $x^2 + 3x - 40$.
- Factorise $a^2 - 12a + 20$.
- Factorise $a^2 - 15a + 56$.
- Factorise $y^2 - y - 56$.
- Factorise $m^2 + 5m - 84$.
- Factorise $p^2 - 16p + 63$.
- Factorise $b^2 + 17b + 72$.
- Fill in: $x^2 + x - 20 = (x + \square)(x - \square)$
- Fill in: $q^2 - 7q - 18 = (q - \square)(q + \square)$ Correct? $x^2 - 9x + 14 = (x - \square)(x - \square)$ Correct? $y^2 + 4y - 21 = (y + \square)(y - \square)$

- 13.** Odd one out: $x^2 - 4x - 21$, **14.** Write brackets for $x^2 - 11x + 12$. Write brackets for $a^2 + 14a + 49$.
 $(x - 7)(x + 3)$, $(x - 3)(x + 7)$,
 $x^2 + 4x - 21$.

- 16.** Why do the numbers
add to b and multi-
ply to c in $x^2 + bx + c$?