Factorising special double brackets (perfect squares, difference between squares)

Mana Maths

Te reo Māori terms

whakatauwehe
factorise
Open in Te Aka

tapawhā
square
Open in Te Aka

kīanga
expression
Open in Te Aka

taiapa
bracket
Open in Te Aka

Factorising special double brackets (perfect squares, difference between squares) — Foundation

1. Factorise $x^2 + 6x + 9$.

2. Factorise $x^2 + 10x + 25$.

3. Factorise $a^2 + 8a + 16$.

4. Factorise $y^2 + 14y +$

5. Factorise $m^2 - 4m + 4$.

6. Factorise $p^2 - 12p + 36$.

7. Factorise $b^2 - 2b +$

8. Factorise $c^2 - 18c +$

9. Factorise $x^2 - 16$.

10. Factorise $a^2 - 25$.

11. Factorise $y^2 - 49$.

12. Factorise $m^2 - 81$.

13. Fill in: $x^2 + 12x + 36 = (x + \square)^2$.

14. Fill in: $p^2 - 64 = (p - \square)(p + \square)$.

Factorising special double brackets (perfect squares, difference between squares) — Proficient

1. Factorise $x^2 + 18x + 81$. **2.** Factorise $a^2 - 14a + 49$. **3.** Factorise $4y^2 + 12y + 9$. **4.** Factorise $9m^2 - 24r$

5. Factorise $25p^2 - 1$. **6.** Factorise $4b^2 - 49$. **7.** Factorise $36c^2 - d^2$. **8.** Factorise $49r^2 - 81$.

9. Fill in: $x^2 - 20x + 100 = (x - \square)^2$

10. Fill in: $16a^2 - b^2 = (\square a - b)(\square a + b)$.

11. Correct?: $x^2 - 36 = (x - 6)^2$

12. Odd one out: $y^2 - 9$, $(y - 3)(y +$
$(y - 9)(y + 1)$,
3^2.

Factorising special double brackets (perfect squares, difference between squares) — Excellence

1. Factorise $x^2 + 16x + 64$.

2. Factorise $9a^2 + 30a + 25$.

3. Factorise $16y^2 - 40y + 25$.

4. Factorise $81m^2 - n^2$.

5. Factorise $x^4 - 81$.

6. Factorise $25p^2q^2 - 4$.

7. Factorise fully $x^4 - 16$.

8. Factorise fully $81a^2b^2 - 1$.

9. Fill in: $4x^2 + 20x + 25 = (2x$

10. Fill in: $49m^2 - 64 = (7m - \square)(7m + \square)$.

11. Correct? $x^2 - 2x + 1 = (x - 1)(x + 1)$.

12. Correct? $9y^2 - 25 = (3y - 5$

13. Which does not belong: $a^2 - 64$, $(a - 8)(a + 8)$, $(a - 4)^2$, 8^2?

14. Write brackets for $36x^2 + 60x + 25$.

15. Write brackets for $100 - b^2$.

16. Explain how you can tell whether a quadratic is a perfect square trinomial or a difference of squares.