Basic Power Rules

Mana Maths

Te reo Māori terms

taupū
exponent
Open in Te Aka

pūtake
base
Open in Te Aka

tau whakarea
multiplication
Open in Te Aka

tau whakawehe
division
Open in Te Aka

Basic Power Rules — Foundation

1. Write $x^{2} \times x^{3}$ as one power.

2. Write $a^{4} \times a^{2}$ as one power.

3. Write $m^{5} \times m$ as one power.

4. Simplify $y^{7} \div y^{2}$.

5. Simplify $b^{6} \div b^{5}$.

6. Simplify $p^{9} \div p^{3}$.

7. Simplify $(k^{3})^{2}$.

8. Simplify $(c^{4})^{3}$.

9. Simplify $(n^{2})^{5}$.

10. Fill in: $q^{2} \times q^{5} = q^{\square}$.

11. Fill in: $r^{8} \div r^{3} = r^{\square}$.

12. Fill in: $(t^{6})^{2} = t^{\square}$.

13. True or false: $s^3 \times s^4 = s^7$.

14. True or false: $(w^2)^3 = w^6$.

Basic Power Rules — Proficient

1. Simplify $x^3 \times x^5$.

2. Simplify $2a^4 \times 3a^2$.

3. Simplify $m^2 \times m^6 \times m$.

4. Simplify $y^9 \div y^4$.

5. Simplify $12b^7 \div 3b^2$.

6. Simplify $p^8 \div p^8$.

7. Simplify $(k^2)^4$.

8. Simplify $(3c^3)^2$.

9. Simplify $(n^5)^2 \div n^3$.

10. Fill in: $q^4 \times q^{\square} = q^9$.

11. Fill in: $r^{10} \div r^{\square} = r^6$

12. Why is $(t^3)^2 = t^5$ wrong?

Basic Power Rules — Excellence

1. Simplify $x^2 \times x^5 \div x^3$.

2. Simplify $4a^3 \times 2a^4$.

3. Simplify $18m^9 \div 6m^4$.

4. Simplify $(y^3)^4$.

5. Simplify $(2b^2)^3$.

6. Simplify $(p^4)^2 \div p^5$.

7. Write $\dfrac{c^7 \times c^2}{c^5}$ as one power.

8. Write $\dfrac{(n^3)^2 \times n^4}{n^5}$ as one power.

9. Fill in: $r^3 \times r^{\square} \div r^2 = r^8$.

10. Fill in: $(t^{\square})^3 = t^{15}$.

11. True or false: $(w^2)^4 \div w^3 = w^5$. Why?

12. Which is greater: $q^6 \div q^2$ or $(q^2)^3 \div q$?

13. Find the missing power: $3x^2 \times \square = 12x^7$.

14. Find the missing power: $24y^9 \div \square = 6y^4$.

15. Make an expression with $\times$, $\div$, and brackets that simplifies to z^6.

16. Where is the error in $k^4 \div k^2 = k^2 \div k^2 = 1$?