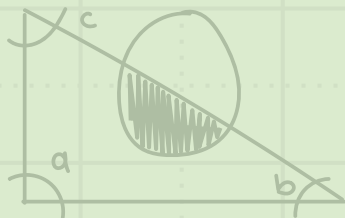


$$2x(d)(f)(h) = \frac{x^2 - d f h}{2d_2 - f h 2d(x)}$$



$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(ac)}$$

Potenciação

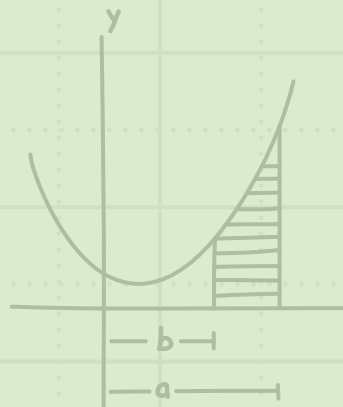


$$\frac{(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$



$$\frac{4x^2(af)}{3x^2 + dn}$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(a)} = \frac{4x^2(af)}{3x^2 + dn}$$



O que é Potenciação?

Potenciação é uma forma de simplificar a multiplicação de fatores iguais:

$$5 \times 5 \times 5 = 5^3$$

Diagram illustrating the components of a power expression:

$$5^3 = 125$$

Labels: **base** (5), **expoente** (3), **potência** (125)

$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$h = 2x^2 + (df) = 45^\circ$$

$$x^2 = 2 \times b^2$$



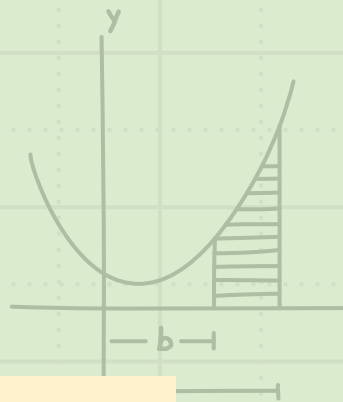
Propriedades da Potenciação

$$x^2 - 2b - ac_2(x^2)$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(ac)}$$

$$\frac{4x^2(af)}{3x^2 + dn}$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(a)} = \frac{4x^2(af)}{3x^2 + dn}$$



Propriedade 1: Expoente Zero

Qualquer número elevado a 0 é igual a 1

$$3^0 = 1$$

$$3^0 = 1$$

$$3^1 = 3$$

$$3^2 = 9$$

$$3^3 = 27$$

$$= 2 \times b^2$$

$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$\frac{4x^2(af)}{3x^2 + dn}$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(a)} = \frac{4x^2(af)}{3x^2 + dn}$$



Propriedade 2: Potência com Expoente Negativo

Expoente negativo? Inverta a base!

RESOLVA:

$$3^{-3}$$

$$5^{-4} =$$

$$1 / 5^4 =$$

$$1 / (5 \times 5 \times 5 \times 5) =$$

$$1/625$$

$$x^2 = 2 \times b^2$$

$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$\frac{4x^2(af)}{3x^2+dn}$$

$$\frac{x^2(4ab)+(2c)}{x^2+x^3(a)} = \frac{4x^2(af)}{3x^2+dn}$$



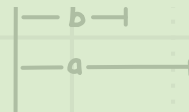
Propriedade 3: Numerador e Denominador

Potência com fração? Eleva tudo!

$$(8/9)^4 = 8^4 / 9^4$$

RESOLVA:

$$(2/4)^2$$



$$x^2 = 2 \times b^2$$

$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$\frac{4x^2(af)}{3x^2 + dn}$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(a)} = \frac{4x^2(af)}{3x^2 + dn}$$



Propriedade 4: Base negativa sem parênteses

Base negativa SEM parênteses: cuidado!

$$-3^2 = -(3 \times 3) = -9$$

O sinal "-" fica fora!

$$\begin{aligned} (-3)^2 &= 9 \\ -3^2 &= -9 \end{aligned}$$



$$^2 = 2 \times b^2$$

$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$h = 2x^2 + (df) = 45^\circ$$

$$x^2 = 2 \times b^2$$



Multiplicação e Divisão de Potências

$$x^2 - 2b - ac_2(x^2)$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(ac)}$$

$$\frac{4x^2(af)}{3x^2+dn}$$

$$\frac{x^2(4ab)+(2c)}{x^2+x^3(a)} = \frac{4x^2(af)}{3x^2+dn}$$

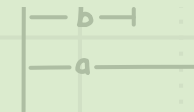


Multiplicação de potências com mesma base

Regra: soma-se os expoentes

$$5^5 \times 5^4 = 5^9$$

$$a^n \cdot a^m = a^{m+n}$$



$$x^2 = 2 \times b^2$$

$$z^2 = \frac{(x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$\frac{4x^2(af)}{3x^2+dn}$$

$$\frac{x^2(4ab)+(2c)}{x^2+x^3(a)} = \frac{4x^2(af)}{3x^2+dn}$$



Divisão de potências com mesma base

Regra: subtraem-se os expoentes

$$7^6 \div 7^3 = 7^3$$

$$\frac{a^m}{a^n} = a^{m-n}$$

$$f = (x^2) + (2x)dh + abc(2x) = 15^\circ$$

$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(ac)}$$

$$x^2 - 2b - ac_2(x^2)$$



Obrigado!



$$\frac{x^2(4ab) + (2c)}{x^2 + x^3(ac)} = \frac{4x^2(ac)}{3x^2 + dn}$$

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$$\frac{z^2 = (x^2)(x^3) + (abc) - (2x)}{x^2 - 2b - ac_2(x^2)}$$

$$2x(d)(f)(h) = \frac{x^2 - dfh}{2d_2 - fh2d(x)}$$