

Exercícios Prova - Álgebra

1º Trimestre - 9º Ano

1.
$$\frac{x^2 - 8x + 15}{(x^2 - 25)}$$

$$\frac{(x-3)(x-5)}{(x+5)(x-5)} = \frac{x-3}{x+5}$$

2. $x + y = 13 \quad xy = 1 \quad x^2 + y^2 = ?$

$$(x+y)^2 = 13^2$$

$$x^2 + 2xy + y^2 = 169$$

$$x^2 + y^2 = 169 - 2xy$$

$$x^2 + y^2 = 169 - 2 \cdot 1$$

$$x^2 + y^2 = 167$$

3. $ac + 2bc - ad - 2bd$

$$ac - ad + 2bc - 2bd$$

$$a(c-d) + 2b(c-d)$$

$$(a+2b)(c-d)$$

1	1,0
2	0,8
3	0,8
4	0,8
5	0,8
6	0,8
	<hr/>
	5,0

4. $A = x - 3 \quad B = x^2 + 3 \quad C = 9x$

$$A^2 - B + C$$

$$(x-3)^2 - (x^2+3) + 9x$$

$$x^2 - 6x + 9 - x^2 - 3 + 9x$$

$$3x + 6$$

$$5. x^2 + \frac{1}{x^2} = 5$$

$$\left(x - \frac{1}{x}\right)^2 = x^2 - 2 \cdot x \cdot \frac{1}{x} + \frac{1}{x^2}$$

$$x^2 + \frac{1}{x^2} = 5$$

$$E_{\text{mas}} 5 - 2 = 3$$

$$6. (x-3)^2 - (x+2)^2 + (x+3)(x-1)$$

$$x^2 - 6x + 9 - (x^2 + 4x + 4) + x^2 - x + 3x - 3$$

$$x^2 - 6x + 9 - x^2 - 4x - 4 + x^2 - x + 3x - 3$$

$$x^2 - 8x + 2$$

Desafio

$$Ac + Ad + bc + bd$$

$$A(c+d) + b(c+d)$$

$$(A+b)(c+d)$$

Seja assim:

$$34 \cdot 59 = 2006$$

$$A + b = 34$$

$$c + d = 59$$

$$701 = 59 + 59x$$

$$bcs - ba - cds + ca$$

$$bd - cd + bc - ca$$

$$(b-c)ds + (b-c)a$$

$$(b-c)(d+a)$$

$$x^2 + 3x = 8 \quad 3 - x = A$$

$$A - B = C$$

$$x^2 + (3-x) = 8$$

$$x^2 + 3 - x - 8 = 0$$

$$x^2 - x - 5 = 0$$