

$$c) x^2 - 6x + 9 \quad \begin{cases} \Delta = (-6)^2 - 4 \cdot 1 \cdot 9 \\ \Delta = 36 - 36 \\ \Delta = 0 \quad \sqrt{\Delta} = 0 \end{cases}$$

$$x = \frac{6 \pm \sqrt{0}}{2} \quad \begin{cases} x' = 6/2 = 3 \\ x'' = 6/2 = 3 \end{cases}$$

B.21 Resolução:

$$a(x-x') \cdot (x-x'') \rightarrow (x-3)(x-3)$$

$$a) \sqrt{81x^3} \rightarrow \sqrt{9^2 \cdot x^3} \rightarrow 9\sqrt{x^3}$$

$$\rightarrow 9\sqrt{x^2 \cdot x} \rightarrow 9x\sqrt{x}$$

$$(x-3)^2 \quad \therefore \sqrt{(x-3)^2} = |x-3|$$

$$|x-3| = \begin{cases} x-3 & \text{se } x > 3 \\ 0 & \text{se } x = 3 \\ -x+3 & \text{se } x < 3 \end{cases}$$

$$b) \sqrt{45x^3 \cdot y^2} \rightarrow yx\sqrt{45 \cdot x} \rightarrow$$

$$yx\sqrt{3^2 \cdot 5 \cdot x} \rightarrow 3yx\sqrt{5x}$$

$$d) 4x^2 + 4x + 1 \quad \begin{cases} \Delta = 4^2 - 4 \cdot 4 \cdot 1 \\ \Delta = 16 - 16 \\ \Delta = 0 \quad \sqrt{\Delta} = 0 \end{cases}$$

$$x = \frac{-4 \pm \sqrt{0}}{2 \cdot 4} \quad \begin{cases} x' = \frac{-4}{8} = -\frac{1}{2} \\ x'' = -\frac{1}{2} \end{cases}$$

$$c) \sqrt{12x^4 \cdot y^5} \rightarrow \sqrt{2^2 \cdot 3 \cdot x^4 \cdot y^5} \rightarrow$$

$$2\sqrt{3 \cdot (x^2)^2 \cdot y^4 \cdot y} \rightarrow 2x^2\sqrt{3 \cdot (y^2)^2 \cdot y} \rightarrow$$

$$2x^2 \cdot y^2 \sqrt{3y} //$$

$$a(x-x') \cdot (x-x'') \rightarrow 4\left(x+\frac{1}{2}\right)\left(x+\frac{1}{2}\right)$$

$$(4x+2)(4x+2) \rightarrow (4x+2)^2$$

$$\sqrt{(4x+2)^2} = |4x+2|$$

$$d) \sqrt{8x^2} \rightarrow x\sqrt{8} \rightarrow x\sqrt{2^2 \cdot 2}$$

$$2x\sqrt{2} //$$

$$|4x+2| = \begin{cases} 4x+2 & \text{se } x > -\frac{1}{2} \\ 0 & \text{se } x = -\frac{1}{2} \\ -4x-2 & \text{se } x < -\frac{1}{2} \end{cases}$$

B.28 Resolução

$$a) (4\sqrt{8} - 2\sqrt{18}) : \sqrt[3]{2} \Rightarrow$$

$$(4 \cdot 2\sqrt{2} - 2 \cdot 3\sqrt{2}) : \sqrt[3]{2} \Rightarrow$$

$$(8\sqrt{2} - 6\sqrt{2}) : \sqrt[3]{2} \Rightarrow$$

$$2\sqrt{2} : \sqrt[3]{2} \Rightarrow 2\sqrt[6]{2^3}$$

$$\frac{2\sqrt[6]{2^3}}{\sqrt[6]{2^2}} \Rightarrow$$

ou

$$|2x+1| = \begin{cases} 2x+1 & \text{se } x > -\frac{1}{2} \\ 0 & \text{se } x = -\frac{1}{2} \\ -2x+1 & \text{se } x < -\frac{1}{2} \end{cases}$$

$$\frac{2 \cdot \sqrt[6]{2^3}}{1 \cdot \sqrt[6]{2^2}} \Rightarrow 2 \cdot \sqrt[6]{\frac{2^3}{2^2}} \Rightarrow$$

$$2 \cdot \sqrt[6]{2} //$$