

RADICACIÓN

Problema 38:

Simplifica:

$$\frac{a+b}{2}(\sqrt{a} + \sqrt{b})(\sqrt{5} + \sqrt{3}) \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right) (\sqrt{20} - \sqrt{12}) (a-b)$$

Solución Problema 38:

$$\frac{a+b}{2}(\sqrt{a} + \sqrt{b})(\sqrt{5} + \sqrt{3}) \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right) (\sqrt{20} - \sqrt{12}) (a-b)$$

$$\frac{a+b}{2}(\sqrt{a} + \sqrt{b})(\sqrt{5} + \sqrt{3}) \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right) (\sqrt{4x5} - \sqrt{4x3}) (a-b)$$

$$\frac{(a+b)(a-b)}{2}(\sqrt{a} + \sqrt{b})(\sqrt{5} + \sqrt{3}) \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right) (2\sqrt{5} - 2\sqrt{3})$$

$$\frac{a^2 - b^2}{2}(\sqrt{a} + \sqrt{b})(\sqrt{5} + \sqrt{3})(2\sqrt{5} - 2\sqrt{3}) \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right)$$

$$\frac{a^2 - b^2}{2}(\sqrt{a} + \sqrt{b})[5 - 3]x2 \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right)$$

$$\frac{a^2 - b^2}{2}(\sqrt{a} + \sqrt{b})[2x2] \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right)$$

$$2(a^2 - b^2)(\sqrt{a} + \sqrt{b}) \left(\sqrt{\frac{a}{2}} - \sqrt{\frac{b}{2}} \right) = 2(a^2 - b^2)(\sqrt{a} + \sqrt{b}) \frac{(\sqrt{a} - \sqrt{b})}{\sqrt{2}}$$

$$= 2(a^2 - b^2)(a-b) \frac{\sqrt{2}}{2} = (a^2 - b^2)(a-b)\sqrt{2}$$