

Solución de Límites por Racionalización



$$\lim_{x \rightarrow 3} \frac{x^2 - 9}{\sqrt{x} - \sqrt{3}}$$



Paso 1 $\frac{\square^2 - 9}{\sqrt{\square} - \sqrt{3}} = \frac{\square - 9}{\sqrt{\square} - \sqrt{3}} = \frac{\square}{\square} \rightarrow \text{Caso } \square$

Paso 2 $\frac{x^2 - 9}{\sqrt{x} - \sqrt{3}} \cdot \frac{\sqrt{x} + \sqrt{3}}{\sqrt{x} + \sqrt{3}}$

Paso 3 $\frac{(x^2 - 9)(\sqrt{x} + \sqrt{3})}{(\sqrt{x} - \sqrt{3})(\sqrt{x} + \sqrt{3})} \rightarrow \frac{(x^2 - 9)(\sqrt{x} + \sqrt{3})}{(\sqrt{\square})^{\square} - (\sqrt{\square})^{\square}}$

$$\rightarrow \frac{(x^2 - 9)(\sqrt{x} + \sqrt{3})}{\square \square \square} \rightarrow \frac{(\square + \square)(\square - \square)(\sqrt{x} + \sqrt{3})}{\square \square \square}$$

$$\rightarrow \frac{(\square + \square)(\sqrt{x} + \sqrt{3})}{1}$$

Paso 4 $\lim_{x \rightarrow 3} \frac{(\square + \square)(\sqrt{\square} + \sqrt{3})}{1} \rightarrow \frac{(\square)(\square + \sqrt{\square})}{1} \rightarrow \boxed{\square + \square \sqrt{\square}}$