$$\frac{2x+3}{x-3} - \frac{x}{x+3} = \frac{5x+2}{x^2-9} - 5$$

$$mcm\,(x-3,\ x+3,\ x^2-9) = (x+3)(x-3)$$

$$x-3 = x-3$$

$$x+3 = x+3$$

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

$$\frac{(2x+3)(x+3)}{(x-3)(x+3)} - \frac{\overset{x^2-3x}{x(x-3)}}{(x-3)(x+3)} = \frac{5x+2}{(x-3)(x+3)} - \frac{\overset{x^2-9}{5(x-3)(x+3)}}{(x-3)(x+3)}$$

$$2x^2+6x+3x+9-(x^2-3x) = 5x+2-(5x^2-45)$$

$$2x^2+6x+3x+9-x^2+3x = 5x+2-5x^2+45$$

$$2x^2-x^2+5x^2+6x+3x+3x-5x+9-2-45 = 0$$

$$6x^2+7x-38 = 0$$

$$x = \frac{-7 \pm \sqrt{7^2-4\cdot 6\cdot(-38)}}{2\cdot 6} = \frac{-7 \pm \sqrt{961}}{12} =$$

$$= \frac{-7 \pm 31}{12} = \begin{cases} \frac{24}{12} = 2 \checkmark \\ -\frac{38}{12} = -\frac{19}{6} \checkmark \end{cases}$$

• COMPROBADAS, AMBAS SON SOLUCIÓN

$x=2$ y $x=-\frac{19}{6}$ SON SOLUCIÓN