Solve the rational equation $\frac{1}{x+6}+\frac{x}{x+9}-\frac{27}{x^2+15x+54}=0$ and check your solution.

Answer:

$$\frac{\square}{\square}+\frac{\square}{\square}-\frac{\square}{\square}=0$$

$$\frac{1(\square)}{x+6}+\frac{x(\square)}{x+9}-\frac{27(\square)}{(x+6)(x+9)}=0(\square)$$

$$x+9+\square-27=0$$

$$x+9+\square-27=0$$

$$\square=0$$

$$x=\square \qquad x=\square$$

Check solution $x=2$.

$$\frac{\square}{\square}+\frac{\square}{\square}-\frac{\square}{\square}\overset{?}{=}0$$

$$0=0 \ \checkmark$$

Check solution $x=-9$.

$$\frac{\square}{\square}+\frac{\square}{\square}-\frac{\square}{\square}\overset{?}{=}0$$

$$\square\overset{?}{=}0$$