

Restrictions: $z \neq 0$

$$\boxed{z=0}$$

$$\frac{z+1}{z-3} = \frac{z+2}{z-3}$$

$$\frac{z+2}{z-3} = \frac{z+2}{z-3}$$

$$\boxed{z=2}$$

$$\frac{z+2}{z-3} = \frac{z+2}{z-3}$$

$$z(z+3)(3z-2)$$

$$\begin{array}{r} 3z \cdot z(z+3)(3z-2) \quad | \quad \frac{3z^2+7z-6}{z(z+3)(3z-2)} \quad | \quad 4 \cdot \frac{z(z+3)}{z(z+3)} \\ \hline 3z^2+7z-6 \quad | \quad z \quad | \quad 3z^2-2z \\ (z+3)(3z-2) \quad | \quad \quad | \quad \frac{z(z+3)}{z(z+3)} \\ \hline \end{array}$$

$$3z^2 - (3z^2 + 7z - 6) = 4(z+3)$$

$$\cancel{3z^2} - \cancel{3z^2} - 7z + 6 = 4z + 12$$

$$\begin{array}{r} -7z + 6 = 4z + 12 \\ -4z \quad \quad -4z \\ \hline \end{array}$$

$$\begin{array}{r} -11z + 6 = 12 \\ \quad \quad -6 \quad \quad -6 \\ \hline \end{array}$$

$$\begin{array}{r} -11z = 6 \\ \quad \quad -11 \quad \quad -11 \\ \hline \end{array}$$

$$z = \frac{-6}{11}$$