

$$\begin{aligned} \cancel{6}x + 3 &< \cancel{6}x + 9 \\ -\cancel{6}x & \quad -\cancel{6}x \\ 0x + 3 &< 9 \\ -3 & \quad -3 \\ 0x &< 6 \\ 0 &< 6 \text{ yes} \\ \text{X could be anything} & \\ \text{INFINITE SOLUTIONS} & \end{aligned}$$

$$\begin{aligned} \cancel{6}x - 3 &> \cancel{6}x + 2 \\ -\cancel{6}x & \quad -\cancel{6}x \\ 0x - 3 &> 2 \\ +3 & \quad +3 \\ 0x &> 5 \\ 0 &> 5 \text{ not true} \\ \text{NO SOLUTION} & \end{aligned}$$