

$$\begin{array}{l} x-3 \\ 4x^2+24x+36 \end{array}$$

$$\cdot \left(\begin{array}{l} x \\ 3x-9 \end{array} - \begin{array}{l} 3 \\ x^2+3x \end{array} + \begin{array}{l} x^2+9 \\ 27-3x^2 \end{array} \right) =$$

$$\begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} x \\ 3(x-3) \end{array} - \begin{array}{l} 3 \\ x(x+3) \end{array} + \begin{array}{l} x^2+9 \\ 3(3-x)(3+x) \end{array} \right) =$$

$$\begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} x \\ 3(x-3) \end{array} - \begin{array}{l} 3 \\ x(x+3) \end{array} - \begin{array}{l} x^2+9 \\ 3(x-3)(3+x) \end{array} \right) =$$

$$\begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} x^2(x+3)-9(x-3)-x(x^2+9) \\ 3x(x-3)(x+3) \end{array} \right) =$$

$$\begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} x^3+3x^2-9x+27-x^3-9x \\ 3x(x-3)(x+3) \end{array} \right) =$$

$$\begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} 3x^2-18x+27 \\ 3x(x-3)(x+3) \end{array} \right) =$$

$$\begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} 3x(x-3)(x+3) \\ 3(x^2-6x+9) \end{array} \right) = \begin{array}{l} x-3 \\ 4(x+3)^2 \end{array}$$

$$\cdot \left(\begin{array}{l} 3x(x-3)(x+3) \\ 3(x-3)^2 \end{array} \right) = \begin{array}{l} 3x((x-3)^2)(x+3) \\ 3(x-3)^2(4(x+3)^2) \end{array} \cdot \begin{array}{l} x \\ 4x+12 \end{array}$$