

$$\begin{aligned}
 Q1) \quad & \frac{3z-15}{55} = \frac{z-5}{77z} \\
 & = \frac{3z-15}{55} \times \frac{77z}{z-5} \\
 & = \frac{3(z-5)}{11 \times 5} \times \frac{11 \times 7}{(z-5)} \\
 & = \frac{21}{5}
 \end{aligned}$$

$$\begin{aligned}
 Q2) \quad & 4x(x-4) - 5x(x-3) = 0 \\
 & 4x^2 - 16x - 5x^2 + 15x = 0 \\
 & -x^2 - x = 0 \\
 & -x(x+1) = 0 \\
 & x = 0, -1
 \end{aligned}$$

$$\begin{aligned}
 Q3) \quad & \sqrt[3]{\frac{64x^{14}}{y^3}} \\
 & = \sqrt[3]{\frac{4^3 x^{12} x^2}{y^3}} \\
 & = \sqrt[3]{\frac{4^3 (x^4)^3 x^2}{y^3}} \\
 & = \frac{4x^4 \sqrt[3]{x^2}}{y}
 \end{aligned}$$