

$$\begin{aligned} 14 \text{ c (ii)} \quad & \log_p q \times \log_q r \times \log_r p \\ &= \frac{\log_q q}{\log_q p} \times \log_q r \times \frac{\log_q p}{\log_q r} \\ &= \log_q q \\ &= \underline{\underline{1}} \end{aligned}$$

$$18a) \log_{2x} 216 = x$$

$$(2x)^x = 216$$

$$2^x \times x^x = 216$$

$$2^3 \times 3^3 = 216$$

$$\underline{x = 3}$$

