



$$\begin{aligned}
 3 \text{ (i)} \quad & (3^0 + 4^{-1}) \times 2^2 \\
 & = \left(1 + \frac{1}{4}\right) \times 4 \\
 & = \frac{4+1}{4} \times 4 \\
 & = 5
 \end{aligned}$$

$$\begin{aligned}
 \text{(ii)} \quad & (2^{-1} \times 4^{-1}) \div 2^{-2} \quad \text{or} \quad \frac{(2 \times 4)^{-1}}{2^{-2}} \\
 & = (2 \times 4)^{-1} \div 2^{-2} \\
 & = 8^{-1} \div 2^{-2} \\
 & = \frac{1}{8} \div \frac{1}{4} \\
 & = \frac{1}{8} \times \frac{4}{1} \\
 & = \frac{1}{2} \\
 & = \frac{4}{8} \\
 & = \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 3 \text{ (iii)} \quad & \left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2} \\
 & = 2^2 + 3^2 + 4^2 \\
 & = 4 + 9 + 16 \\
 & = 29
 \end{aligned}$$