

EX 4.1.2

$$\begin{aligned} \text{g)} \quad 4^2 \cdot 2^5 \cdot 8^2 &= (2^2)^2 \cdot 2^5 \cdot (2^3)^2 \\ &= 2^4 \cdot 2^5 \cdot 2^6 = 2^{15} \end{aligned}$$

$$\text{h)} \quad \left(\frac{3}{4}\right)^4 \div \left(\frac{9}{8}\right)^4 = \left(\frac{\overset{1}{\cancel{3}}}{\underset{1}{\cancel{4}}} \cdot \frac{\overset{2}{\cancel{8}}}{\underset{3}{\cancel{9}}}\right)^4 = \left(\frac{2}{3}\right)^4 = \frac{2^4}{3^4}$$

$$\text{i)} \quad \frac{(3 \cdot 9 \cdot 27 \cdot 81)^5}{3^{50}} = \frac{(3 \cdot 3^2 \cdot 3^3 \cdot 3^4)^5}{3^{50}} = \frac{(3^{10})^5}{3^{50}} = \frac{3^{50}}{3^{50}} = 1$$