

c)

$$\begin{aligned}\frac{18^6 * 25^5 * 8^4}{24^5 * 75^4 * 36^2} &= \frac{18^6 * 25^5 * 8^4}{3^5 * 8^5 * 3^4 * 25^4 * 2^2 * 18^2} = \frac{18^{6-2} * 25^{5-4}}{3^5 * 8^{5-4} * 3^4 * 2^2} \\ &= \frac{18^4 * 25}{3^{5+4} * 8 * 2^2} = \frac{2^4 * (3^2)^4 * 25}{3^9 * 2^3 * 2^2} = \frac{2^4 * 3^8 * 25}{3^9 * 2^5} = \frac{25}{3 * 2}\end{aligned}$$

d)

$$\begin{aligned}\frac{225^3 * 16^5 * 28 * 4}{96^4 * 35^3 * 200^2} &= \frac{(9^3 * 25^3) * 16^5 * (4 * 7) * 4}{(6^4 * 16^4) * (5^3 * 7^3) * (8^2 * 25^2)} \\ &= \frac{(9^3 * 25^{3-2}) * 16^{5-4} * (4) * 4}{(6^4) * (5^3 * 7^{3-1}) * (8^2)} = \frac{9^3 * 25 * 16 * 16}{6^4 * 5 * 25 * 7^2 * 8^2} = \frac{3^6 * (2 * 8) * (2 * 8)}{(2^4 * 3^4) * 5 * 7^2 * 8^2} \\ &= \frac{3^{6-4} * 2^2}{2^4 * 5 * 7^2} = \frac{3^2}{2^2 * 5 * 7^2}\end{aligned}$$