

Simplifique as expressões

$$a) \frac{(6^2)^5 \cdot 6^4}{6^{11}} = \frac{6^{10} \cdot 6^4}{6^{11}} = \frac{6^{14}}{6^{11}} = 6^3 =$$

$$6^3 = 6 \times 6 \times 6 = 216$$

$$\begin{aligned}
 b) \frac{2^{-6} \cdot 2^4}{2^{-2} \cdot 2^{-3}} &= \frac{2^{-6+4}}{2^{-2+(-3)}} = \frac{2^{-2}}{2^{-5}} = \\
 &2^{-2-(-5)} = 2^{-2+5} = 2^3 = 8
 \end{aligned}$$

$$c) \frac{3^2 \cdot 3^7 \cdot \left(\frac{1}{3}\right)^{-4}}{3^9} = \frac{3^2 \cdot 3^7 \cdot 3^4}{3^9} =$$

$$\frac{3^{2+7+4}}{3^9} = \frac{3^{13}}{3^9} = 3^{13-9} = 3^4$$

$$3 \times 3 \times 3 \times 3 = 81$$