

Correction de l'exercice 5 :

$$\text{a) } (10^{-15})^{-1} = 10^{-15 \times (-1)} = 10^{15}$$

$$\text{b) } 10^{-4} \times 10^8 = 10^{-4+8} = 10^4$$

$$\text{c) } \frac{10^{10}}{10^{22}} = 10^{10-22} = 10^{-12}$$

$$\text{d) } \frac{10^7 \times 10^3}{10^4} = \frac{10^{7+3}}{10^4} = \frac{10^{10}}{10^4} = 10^{10-4} = 10^6$$

Correction de l'exercice 6 :

$$\text{a) } \frac{10^5}{(10^3)^{-2}} = \frac{10^5}{10^{3 \times (-2)}} = \frac{10^5}{10^{-6}} = 10^{5-(-6)} = 10^{5+6} = 10^{11}$$

$$\text{b) } \frac{10^{-9}}{10^{-1}} \times 10^{-4} = 10^{-9-(-1)} \times 10^{-4} = 10^{-9+1} \times 10^{-4} = 10^{-8} \times 10^{-4} = 10^{-8+(-4)} = 10^{-8-4} = 10^{-12}$$

$$\text{c) } \frac{(10^2)^6}{10^{-2} \times 10^{-3}} = \frac{10^{2 \times 6}}{10^{-2} \times 10^{-3}} = \frac{10^{12}}{10^{-2+(-3)}} = \frac{10^{12}}{10^{-2-3}} = \frac{10^{12}}{10^{-5}} = 10^{12-(-5)} = 10^{12+5} = 10^{17}$$