Correction de l'exercice 3 :

a) $10^{2} \times 10^{3} = 10^{2+3} = 10^{5}$

b) $\dfrac{10^{6}}{10^{4}} = 10^{6-4} = 10^{2}$

c) $(10^{5})^{-2} = 10^{5\times(-2)} = 10^{-10}$

d) $10^{-6} \times 10^{-5} = 10^{-6+(-5)} = 10^{-6-5} = 10^{-11}$

e) $\dfrac{10^{8}}{10^{-2}} = 10^{8-(-2)} = 10^{8+2} = 10^{10}$

f) $(10^{4})^{4} = 10^{4\times4} = 10^{16}$

Correction de l'exercice 4 :

a) $(10^{-1})^{8} = 10^{-1\times8} = 10^{-8}$

b) $10^{12} \times 10^{-3} = 10^{12+(-3)} = 10^{12-3} = 10^{9}$

c) $\dfrac{10^{-3}}{10^{9}} = 10^{-3-9} = 10^{-3-9} = 10^{-12}$

d) $(10^{10})^{0} = 10^{10\times0} = 10^{0} = 1$

e) $10^{7} \times 10^{-4} = 10^{7+(-4)} = 10^{7-4} = 10^{3}$

f) $\dfrac{10^{3} \times 10^{6}}{10^{2}} = \dfrac{10^{3+6}}{10^{2}} = \dfrac{10^{9}}{10^{2}} = 10^{9-2} = 10^{7}$