CORRECTION DES EXERCICES :

23 p 171 :
1/ exp(3) × exp(4))^2 = exp(3) × exp(4×2) = exp3×exp(8) = exp(3 + 8) = exp(11).
2/ exp(−10) × exp(6) = exp(−10 + 6) = exp(−4).

24 p 171 :
1/ $[\exp(5)]^{-3} = \exp(-3 \times 5) = \exp(-15)$.
2/ $\dfrac{1}{[\exp(12)]^{-4}} = \dfrac{1}{\exp(-4 \times 12)} = \dfrac{1}{\exp(-48)} = \exp(48)$.
3/ $\dfrac{\exp(2) \times [\exp(-6)]^2}{\exp(3)} = \dfrac{\exp(2) \times \exp(-12)}{\exp(3)} = \dfrac{\exp(-10)}{\exp(3)} = \exp(-10 - 3) = \exp(-13)$.

26 p 171 : 1. e^5×e^{-2}×e^3 = e^6.   2. e^5×(e^8)^2×e = e^{22}.   3. e^{-4}×(e^2)^8×e^{-1} = e^{11} 4. (e^5×e^2)^4 = e^{28}.

28 p 171 : 1. e^{-2}×e^7×e^{-2} = e^3 2. (e^3)^4×e^{-10} = e^3×e^{-1} 3. $\dfrac{e^2}{e^3}$ = e^{-1} 4. $\dfrac{e}{e^4} = \dfrac{e^2}{e^5}$

30 p 171 : 1. $\dfrac{e^x \times (e^x)^2}{e^{2x}} = e^x$.   2. $\dfrac{e^{x+4}}{e^{4x}} = e^{-3x+4}$.   3. $\dfrac{1}{e^{3-2x}} = e^{2x-3}$.

56 p 173 :
A = $e^4 e^3 + e^4 e^7 = e^7 + e^{11}$.
B = $e^2 e^3 + e^2 e + e^6 e^3 + e^6 e = e^5 + e^3 + e^9 + e^7$.
C = $e^8 e^6 + e^8 - e^2 e^6 - e^2 = e^{14} + e^8 - e^8 - e^2 = e^{14} - e^2$.
D = $e^{-2} e^{-2} - e^{-2} e^8 + e^3 e^{-2} - e^3 e^8 = e^{-4} - e^6 + e^1 - e^{11}$.

59 p 173 :
D = $(e^x)^2 + 2e^x e^{-2x} + (e^{-2x})^2 = e^{2x} + 2e^{-x} + e^{-4x}$.
E = $(e^{3x})^2 - 2e^{3x} e^{5x} + (e^{5x})^2 = e^{6x} - 2e^{8x} + e^{10x}$.
F = $(e^{-2x})^2 - (e^x)^2 = e^{-4x} - e^{2x}$.

60 p 173 :
O = $(e^x)^2 + 2e^x e^{-x} + (e^{-x})^2 + (e^x)^2 - 2e^x e^{-x} + (e^{-x})^2 = e^{2x} + 2e^0 + e^{-2x} + e^{2x} - 2e^0 + e^{-2x} = 2e^{2x} + 2e^{-2x}$.
P = $(e^x)^2 + 2e^x e^{-x} + (e^{-x})^2 - [(e^x)^2 - 2e^x e^{-x} + (e^{-x})^2] = e^{2x} + 2e^0 + e^{-2x} - e^{2x} + 2e^0 - e^{-2x} = 4$.

61 p 173 :
1/ $\dfrac{e^x - 1}{e^x} = \dfrac{e^x}{e^x} - \dfrac{1}{e^x} = 1 - e^{-x}$ 2/ $\dfrac{e^x - 1}{e^{2x} - 1} = \dfrac{e^x - 1}{(e^x - 1)(e^x + 1)} = \dfrac{1}{e^x + 1}$.

25 p 171 : 1. $\dfrac{e^{-2} + (e^3)^2}{e^2} \approx 54{,}616$.   2. $e^2 + \dfrac{(e^{-3})^2 + 1}{e^2} \approx 7{,}525$.