

Corrigé exercice 76 :

1. $(n + 1) \times n! = (n + 1)!$
2. $\frac{(n - 5)!}{(n - 7)!} = \frac{1}{(n - 6)(n - 7)}$
3. $\frac{(n + 2)!}{(n + 1)(n + 2)} = n!$
4. $\frac{1}{(n + 1)!} - \frac{1}{n!} = \frac{1}{(n + 1)!} - \frac{n + 1}{(n + 1)!} = -\frac{n}{(n + 1)!}$

Corrigé exercice 77 :

1. $\frac{n! \times (n + 2)!}{(n!)^2} = (n + 2)(n + 1)$
2. $\frac{(n + 1)!}{n!} - \frac{n!}{(n + 1)!} = n + 1 - \frac{1}{n + 1} = \frac{(n + 1)^2 - 1}{n + 1} = \frac{n^2 + 2n}{n + 1}$
3. $\frac{(2(n + 1))!}{(2n + 1)!} = 2n + 2$
4. $\frac{1}{(n - 2)!} - \frac{1}{n!} = \frac{n(n - 1)}{n!} - \frac{1}{n!} = \frac{n^2 - n - 1}{n!}$