

6.15

$$\begin{aligned}
 1) \quad \left\{ \begin{array}{c} \bullet \\ \diagup \quad \diagdown \\ \bullet \quad \bullet \\ \diagdown \quad \diagup \\ \bullet \end{array} \right\} &= \left\{ \begin{array}{c} \bullet \\ | \\ \bullet \end{array} \right\} - \left\{ \begin{array}{c} \bullet \\ \diagup \\ \bullet \end{array} \right\} \\
 &= \text{arbre à 4 sommets} - \text{arbre à 3 sommets} \\
 &= \lambda(\lambda-1)^3 - \lambda(\lambda-1)^2 \\
 &= \lambda(\lambda-1)^2((\lambda-1)-1) \\
 &= \lambda(\lambda-1)^2(\lambda-2)
 \end{aligned}$$

$$\begin{aligned}
 2) \quad \left\{ \begin{array}{c} \bullet \\ \diagup \quad \diagdown \\ \bullet \quad \bullet \\ \diagdown \quad \diagup \\ \bullet \end{array} \right\} &= \left\{ \begin{array}{c} \bullet \\ \diagup \quad \diagdown \\ \bullet \quad \bullet \\ \diagdown \quad \diagup \\ \bullet \end{array} \right\} + \left\{ \begin{array}{c} \bullet \\ \diagup \quad \diagdown \\ \bullet \quad \bullet \\ \diagdown \quad \diagup \\ \bullet \end{array} \right\} \\
 &= \text{graphe complet à 4 sommets} + \text{graphe complet à 3 sommets} \\
 &= \lambda(\lambda-1)(\lambda-2)(\lambda-3) + \lambda(\lambda-1)(\lambda-2) \\
 &= \lambda(\lambda-1)(\lambda-2)((\lambda-3)+1) \\
 &= \lambda(\lambda-1)(\lambda-2)^2
 \end{aligned}$$