

4.1 Pemenuh:

$$\begin{aligned} p &= \left[\binom{2}{7} \binom{2-2}{10-7} \right] \left[\binom{2}{9} \binom{2-2}{11-9} \right] \left[\binom{2}{10} \binom{2}{11} \right]^{-1} = \\ &= \left[\binom{2}{7} \binom{0}{3} \right] \left[\binom{2}{9} \binom{0}{2} \right] \left[\binom{2}{10} \binom{2}{11} \right]^{-1} = \\ &= \frac{\binom{2}{7} \binom{2}{9}}{\binom{2}{10} \binom{2}{11}} = \frac{\binom{2}{7}}{\binom{2}{10}} \cdot \frac{\binom{2}{9}}{\binom{2}{11}} = \\ &= \frac{A_7^2}{2!} \left(\frac{A_{10}^2}{2!} \right)^{-1} \cdot \frac{A_9^2}{2!} \left(\frac{A_{11}^2}{2!} \right)^{-1} = \frac{A_7^2}{A_{10}^2} \cdot \frac{A_9^2}{A_{11}^2} = \\ &= \frac{7 \cdot 6}{10 \cdot 9} \cdot \frac{9 \cdot 8}{11 \cdot 10} = \left(\frac{7}{10} \cdot \frac{6}{9} \right) \cdot \left(\frac{9}{11} \cdot \frac{8}{10} \right) = \\ &= \frac{\cancel{9} \cdot 8 \cdot 7 \cdot \cancel{6}}{11 \cdot 10 \cdot \cancel{10} \cdot \cancel{9}} = \frac{2 \cdot 6 \cdot 7}{11 \cdot 25} = \frac{7 \cdot 12}{11 \cdot 25} = \frac{84}{275} \end{aligned}$$

Jawab:

$$p = \frac{\binom{2}{7} \binom{2}{9}}{\binom{2}{10} \binom{2}{11}} = \frac{84}{275}$$