An urn has 4 red balls and 6 yellow balls. Choose 3 at random (without replacement). What is the probability that **exactly 2 are red**?

- $$\frac{\binom{4}{2}\binom{6}{1}}{10 \cdot 9 \cdot 8}$$

- $$\frac{\binom{4}{2}\binom{6}{1}}{\binom{10}{3}}$$

- $$\frac{(4 \cdot 4 \cdot 6) + (4 \cdot 6 \cdot 4) + (6 \cdot 4 \cdot 4)}{10^3}$$

- $$\frac{(4 \cdot 3 \cdot 6) + (4 \cdot 6 \cdot 3) + (6 \cdot 4 \cdot 3)}{10^3}$$