

ریاضیات برای پایه دهم
(5w)

PAGE

DATE

$$① \quad {}^{250}C_2 = \frac{250!}{2!(250-2)!} = \frac{250 \times 249}{2 \times 1} = 31,125$$

$$② \quad \frac{{}^5C_2}{{}^5C_2} = \frac{5!}{2!(5-2)!} = 10$$

$$10 \times 3 \times 3 \times 3 = 270$$

$$③ \quad 2^3 = 8$$

$$④ \quad {}^{30}C_3 = \frac{30!}{3!(30-3)!} = 4060$$

$$⑤ \quad {}^6C_3 = \frac{6!}{3!(6-3)!} = 20$$

$$⑥ \quad \text{Zero}$$

$$⑦ \quad \cancel{{}^6C_3} \quad {}^4C_3 = \frac{4!}{3!(4-3)!} = 4$$

$$\frac{{}^6C_3}{{}^6C_3} = \frac{6!}{3!(6-3)!} = 20$$

$$\frac{{}^6C_3}{{}^4C_3} = \frac{20}{4} = 5$$

$$⑧ \quad A) \quad {}^{32}C_2 \times {}^{20}C_9$$

$$\begin{aligned} & ((11 \times 9!) / (120) \times 32 = 23 \times (20 \times 19 \times 18 \times 17 \times 16 \times 15 \times 14 \times 13 \\ & (1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9) / (12 \\ & = 5,231,680 \end{aligned}$$

$$B) \quad {}^2C_2 \times {}^2C_2 \times {}^2C_2 \times {}^2C_2 \times {}^2C_2 \times {}^{15}C_4 =$$

$$1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1,386,015 = 1,386,015$$