

$$\textcircled{1} {}^{250}C_2 = 31125$$

$$\textcircled{2} \frac{5!}{3!2!} = 10$$

$$\textcircled{3} 2^3 = 8$$

$$\textcircled{4} {}^{30}C_3 = 4060$$

$$\textcircled{5} {}^6C_3 = 20$$

$\textcircled{6}$ zero

$$\textcircled{7} {}^6C_3 - {}^4C_2 = 20 - 6 = 14$$

$$\textcircled{8} \textcircled{a} {}^5C_2 = 10$$

the number of ways to select 4 student of the ²⁰ groups

$${}^{20}C_4 = 4845$$

$$3^2 \times 4845 = 155040$$

$$\textcircled{6} \text{ select 2 student of 5 groups, } {}^5C_2 = 10$$

$$\text{select 4 student of 20 student } {}^{20}C_4 = 4845$$

$$1 \times 4845 = 4845$$