

$6C_3$

$${}^6C_3 = \frac{6 \times 5 \times 4}{3 \times 2 \times 1}$$

$$\textcircled{6}C\textcircled{3} = \frac{\textcircled{6} \times 5 \times 4}{\textcircled{3} \times 2 \times 1}$$

} 3個

$${}^6C_3 = \frac{\cancel{6} \times 5 \times 4}{\cancel{3} \times 2 \times 1}$$

$${}^6C_3 = \frac{\cancel{6} \times 5 \times 4}{\cancel{3} \times 2 \times 1} = 5 \times 4$$

$${}^6C_3 = \frac{\cancel{6} \times 5 \times 4}{\cancel{3} \times 2 \times 1} = 5 \times 4$$
$$= 20 \quad \boxed{\text{答}}$$

組合せ C の計算例

$7C_2$

組合せ C の計算例

$${}^7C_2 = \frac{7 \times 6}{2 \times 1}$$

組合せ C の計算例

$${}^7C_2 = \frac{7 \times 6}{2 \times 1}$$

2個

組合せ C の計算例

$${}^7C_2 = \frac{7 \times 6}{2 \times 1}$$

組合せ C の計算例

$${}^7C_2 = \frac{7 \times \cancel{6}^3}{\cancel{2}^1 \times 1}$$

組合せ C の計算例

$${}^7C_2 = \frac{7 \times \cancel{6}^3}{\cancel{2}_1 \times 1} = 7 \times 3$$

組合せ C の計算例

$$\begin{aligned} {}_7C_2 &= \frac{7 \times \cancel{6}^3}{\cancel{2}_1 \times 1} = 7 \times 3 \\ &= 21 \quad \boxed{\text{答}} \end{aligned}$$

組合せ C の計算例

$${}_{11}C_5$$

組合せ C の計算例

$${}_{11}C_5 = \frac{11 \times 10 \times 9 \times 8 \times 7}{5 \times 4 \times 3 \times 2 \times 1}$$

組合せ C の計算例

$${}_{11}C_5 = \frac{11 \times 10 \times 9 \times 8 \times 7}{5 \times 4 \times 3 \times 2 \times 1}$$

5個

組合せ C の計算例

$${}_{11}C_5 = \frac{11 \times \cancel{10} \times 9 \times 8 \times 7}{\cancel{5} \times 4 \times 3 \times \cancel{2} \times 1}$$

組合せ C の計算例

$${}_{11}C_5 = \frac{11 \times \cancel{10} \times 9 \times \cancel{8} \times 7}{\cancel{5} \times \cancel{4} \times 3 \times \cancel{2} \times 1}$$

The diagram illustrates the calculation of the combination ${}_{11}C_5$. The numerator is $11 \times 10 \times 9 \times 8 \times 7$ and the denominator is $5 \times 4 \times 3 \times 2 \times 1$. Red diagonal lines indicate the cancellation of the factors 10, 8, 5, and 2. Blue numbers 1 and 2 are placed below the 4 and 8 respectively, indicating the remaining factors after cancellation.

組合せ C の計算例

$${}_{11}C_5 = \frac{11 \times \cancel{10} \times \cancel{9}^3 \times \cancel{8}^2 \times 7}{\cancel{5} \times \cancel{4}^1 \times \cancel{3}^1 \times \cancel{2} \times 1}$$

組合せ C の計算例

$$\begin{aligned} {}_{11}C_5 &= \frac{11 \times \cancel{10} \times \cancel{9}^3 \times \cancel{8}^2 \times 7}{\cancel{5} \times \cancel{4}^1 \times \cancel{3}^1 \times \cancel{2} \times 1} \\ &= 11 \times 3 \times 2 \times 7 \end{aligned}$$

組合せ C の計算例

$$\begin{aligned} {}_{11}C_5 &= \frac{11 \times \cancel{10} \times \overset{3}{\cancel{9}} \times \overset{2}{\cancel{8}} \times 7}{\cancel{5} \times \underset{1}{\cancel{4}} \times \underset{1}{\cancel{3}} \times \cancel{2} \times 1} \\ &= 11 \times \overset{3}{3} \times \overset{2}{2} \times 7 \\ &= 462 \quad \boxed{\text{答}} \end{aligned}$$