

1人から2つ選ぶ

$$\textcircled{4} H_2 = 4+2-1 C_2 = 5C_2 = \frac{5 \times 4 \times 3 \times 2 \times 1}{2 \times 1 \times (3 \times 2 \times 1)} = 10$$

4種(冊盛、カニ、ステーキ、アヒル)

2人から4つ選ぶ

$$4H_4 = 4+4-1 C_4 = 7C_4 = \frac{7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{4 \times 3 \times 2 \times 1 \times (3 \times 2 \times 1)} = 35$$

① L人から2L選ぶ

$$4H_{2L} = 4+2L-1 C_{2L} = \frac{(4+2L-1)!}{(2L)! \times (4+2L-1-2L)!}$$

$$= \frac{(3+2L)!}{(2L)! \times 3!}$$

$$= \frac{(3+2L) \times (3+2L-1) \times (3+2L-2) \times (3+2L-3)!}{(2L)! \times 3 \times 2 \times 1}$$

$$= \frac{(3+2L) \times (2+2L) \times (1+2L)}{6}$$

$$= \frac{(6+6L+4L+4L^2)(1+2L)}{6}$$

$$= \frac{(6+10L+4L^2)(1+2L)}{6}$$

$$= \frac{6+10L+4L^2+12L+20L^2+8L^3}{6}$$

$$= \frac{6+22L+24L^2+8L^3}{6}$$

$$= \frac{3+11L+12L^2+4L^3}{3}$$