問題 1から100までの自然数から異なる数を98個選ぶときの選び方の総数を求めよ。

$$
\begin{aligned}
{}_{100}C_{98} &= {}_{100}C_{100-98} \\
&= {}_{100}C_{2} = \frac{{}_{100}P_{2}}{2!} = \frac{100\times 99}{2\times 1} \\
&= \frac{9900}{2} = 4950
\end{aligned}
$$

問題 次の値を求めよ.

(1) $$
\begin{aligned}
{}_{5}C_{4} &= {}_{5}C_{5-4} = {}_{5}C_{1} \\
&= \frac{{}_{5}P_{1}}{1!} = \frac{5\times 1}{1\times 1} = 5
\end{aligned}
$$

(2) $$
\begin{aligned}
{}_{8}C_{6} &= {}_{8}C_{8-6} = {}_{8}C_{2} \\
&= \frac{{}_{8}P_{2}}{2!} = \frac{8\times 7}{2\times 1} = 28
\end{aligned}
$$

(3) $$
\begin{aligned}
{}_{20}C_{18} &= {}_{20}C_{20-18} = {}_{20}C_{2} \\
&= \frac{{}_{20}P_{2}}{2!} = \frac{10\ 20\times 19}{2\times 1} = 190
\end{aligned}
$$