

※ 2020 학년도 대수능 수학 가형 16번.

이것이 아닌 정수 a, b, c, d

$$(7) \quad a+b+c-d=9 \quad \rightarrow \quad a+b+c=9+d.$$

(4) $d \leq 4$ 이고 $c \geq d$.

1. case 1) $d=4, c \geq 4$.

$$\left. \begin{array}{l} a + b + c = 13 \\ 0 + (0 + 13) \\ \quad \quad \quad \dots \\ (9 + 4) \end{array} \right\} 10^m$$

2. case 2) $d=3, c \geq 3$.

$$\begin{array}{l} a + b + c = 12 \\ 0 + (0+12) \\ \quad \quad \quad \text{---} \\ (9+3) \end{array} \left. \vphantom{\begin{array}{l} a + b + c = 12 \\ 0 + (0+12) \\ \quad \quad \quad \text{---} \\ (9+3) \end{array}} \right\} {}_{10}\text{H}_2.$$

3. case 3) $d=2, c \geq 2$.

$$\begin{array}{l} a + b + c = 11. \\ 0 + (0 + 11) \\ \quad \quad \quad - - - - \\ (9 + 2) \end{array} \left. \vphantom{\begin{array}{l} a + b + c = 11. \\ 0 + (0 + 11) \\ \quad \quad \quad - - - - \\ (9 + 2) \end{array}} \right\} \begin{array}{l} 10H_2 \\ 1074 \end{array}$$

4. (case 4) $d=1, c \geq 1$

$$\begin{array}{l} a + b + c = 10 \\ 0 + (0 + 10) \\ \quad \quad \quad \overline{\quad \quad \quad} \\ \quad \quad \quad (9 + 1) \end{array} \quad \left. \vphantom{\begin{array}{l} a + b + c = 10 \\ 0 + (0 + 10) \\ \quad \quad \quad \overline{\quad \quad \quad} \\ \quad \quad \quad (9 + 1) \end{array}} \right\} 10H_2.$$

5. cases) $d=0, c \geq 0$.

$$\left. \begin{array}{l} a + b + c = 10 - 1 = 9 \\ 0 + (0 + 9) \\ \quad \text{---} \\ (9 + 0) \end{array} \right\} \log H.$$

$$\begin{aligned} \therefore 10H_2 \times 5 \\ = 11C_2 \times 5 = 55 \times 5 \\ = 275 \end{aligned}$$

위의 계산들은 비확장으로 계산한 것이

여기서 case 5) 에서 $3H_9$ 를 생산하는 것이 H 중복조합이고,

10H23 계산하는 것이 허황됨.