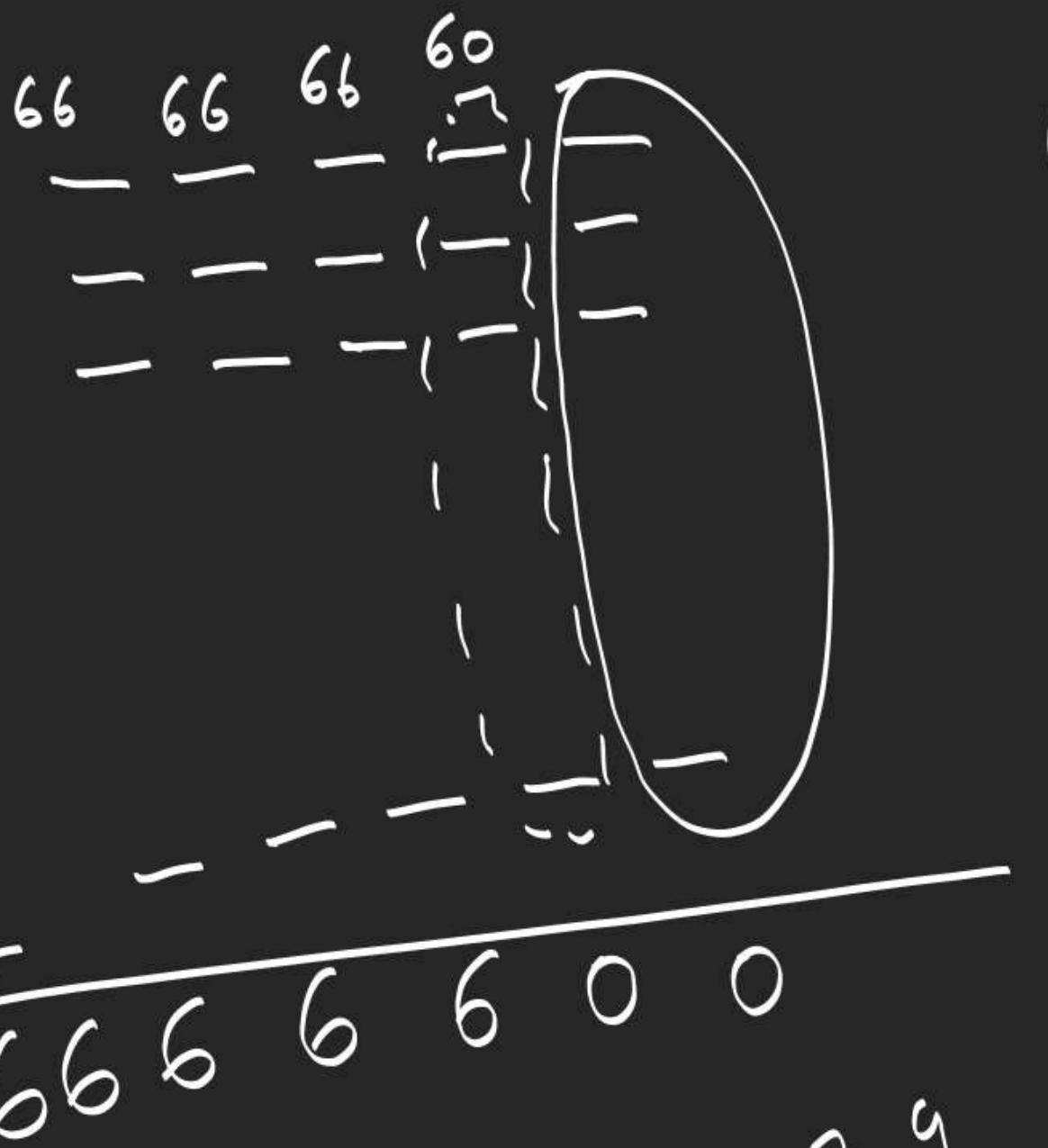


L: Find the sum of all numbers greater than 10000 formed by the digits 1, 3, 5, 7, 9, no digits being repeated.

$$1824 = 1 \times 10^3 + 8 \times 10^2 + 2 \times 10^1 + 4 \times 10^0$$

$$\begin{aligned} & \text{--- --- --- --- } \underbrace{1,3,5,7,9}_{\times 10^4} + () \times 10^3 + () \times 10^2 + () \times 10^1 + () \times 10^0 \\ & \text{--- --- --- --- } \\ & (9+7+5+3+1)4! \times (10^0 + 10^1 + 10^2 + 10^3 + 10^4) \\ & 1 \times 10^1 \quad 4! \quad (10^0 + 10^1 + 10^2 + 10^3 + 10^4) \end{aligned}$$



$$(1+3+5+7+9) \times 24$$

Paper 2 ✓

$\frac{1}{6666600}$

13579

13579+

13579 1 13597, -

2: Find sum of all numbers greater than 10000 formed by digits 0, 2, 4, 6, 8 without repetition.

~~-----~~ $(0+2+4+6+8) 4! \left(10^0 + 10^1 + 10^2 + 10^3 + 10^4\right) - (2+4+6+8) 3! \left(10^0 + 10^1 + 10^2 + 10^3\right)$

~~-----~~

3: Find sum of all distinct 4 digit numbers that contain only the digits 1, 2, 3, 4, 5 each at most once.

$$4! (1+2+3+4+5) 3! \left(10^0 + 10^1 + 10^2 + 10^3\right) \\ [(2+3+4+5) + (1+3+4+5) + (1+2+4+5) + (1+2+3+5)] 3! \left(10^0 + 10^1 + 10^2 + 10^3\right)$$

4. Find the num of all numbers that can be formed
using all the digits 2, 3, 3, 4, 4, 4.