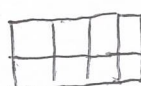
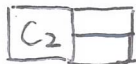




# 永春高中數學科 階城盃答案卷

班級 215 座號 7 姓名 [REDACTED] 第 74 期第 二 大題

(1)

 可分為  $C_3$   +  $C_2$   +  $C_1$   +   
+  + 

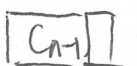
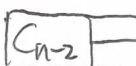
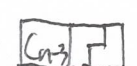
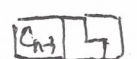
$$\begin{aligned} C_4 &= C_3 + C_2 + 2C_1 + 2 \\ &= 5 + 2 + 2 + 2 \\ &= 11 \end{aligned}$$

(2)

 可分為  $C_4$   +  $C_3$   +  $C_2$   +  $C_1$   +   
+  $C_2$   +  $C_1$   + 

$$\begin{aligned} C_5 &= C_4 + C_3 + 2C_2 + 2C_1 + 2 \\ &= 11 + 5 + 4 + 2 + 2 \\ &= 24 \end{aligned}$$

(3)

$C_n$  可分為  $C_{n-1}$   +  $C_{n-2}$   +  $C_{n-3}$   +  $C_{n-4}$   + ... +   
+  $C_{n-3}$   +  $C_{n-4}$   + ... + 

$$C_n = C_{n-1} + C_{n-2} + 2C_{n-3} + 2C_{n-4} + \dots + 2$$

$$\rightarrow C_{n-1} = C_{n-2} + C_{n-3} + 2C_{n-4} + \dots + 2$$

$$C_n - C_{n-1} = C_{n-1} + C_{n-3}$$

$$\Rightarrow C_n = 2C_{n-1} + C_{n-3}, n \geq 4$$

$$C_6 = 2 \times 24 + 5 = 53$$

$$C_9 = 2 \times 58 + 53 = 569$$

$$C_7 = 2 \times 53 + 11 = 117$$

$$C_{10} = 2 \times 569 + 117 = 1249$$

$$C_8 = 2 \times 117 + 24 = 258$$

可用  
和  
 ...   
 ... 