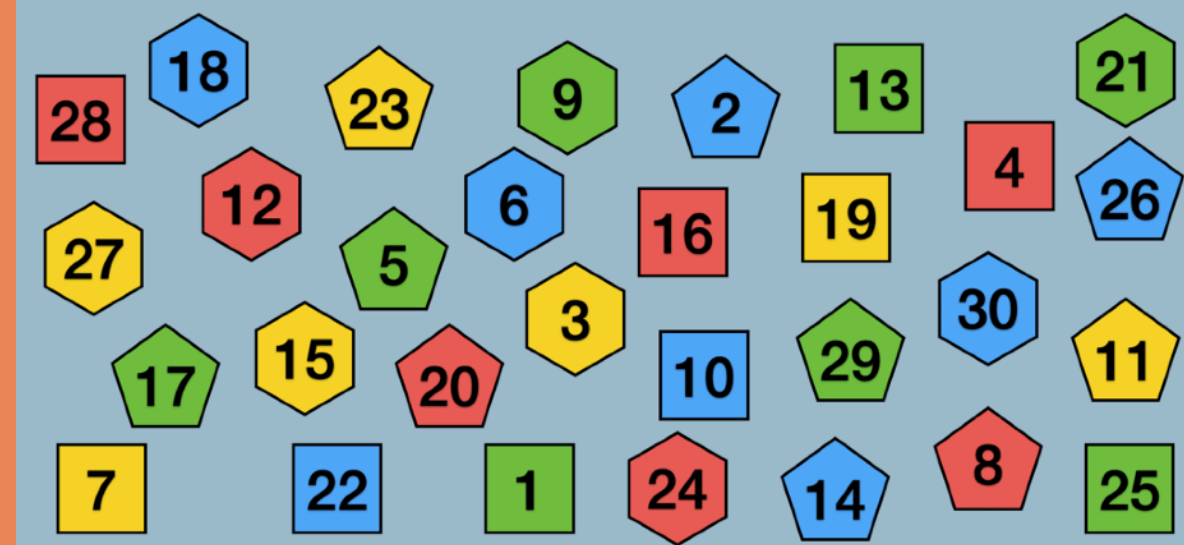
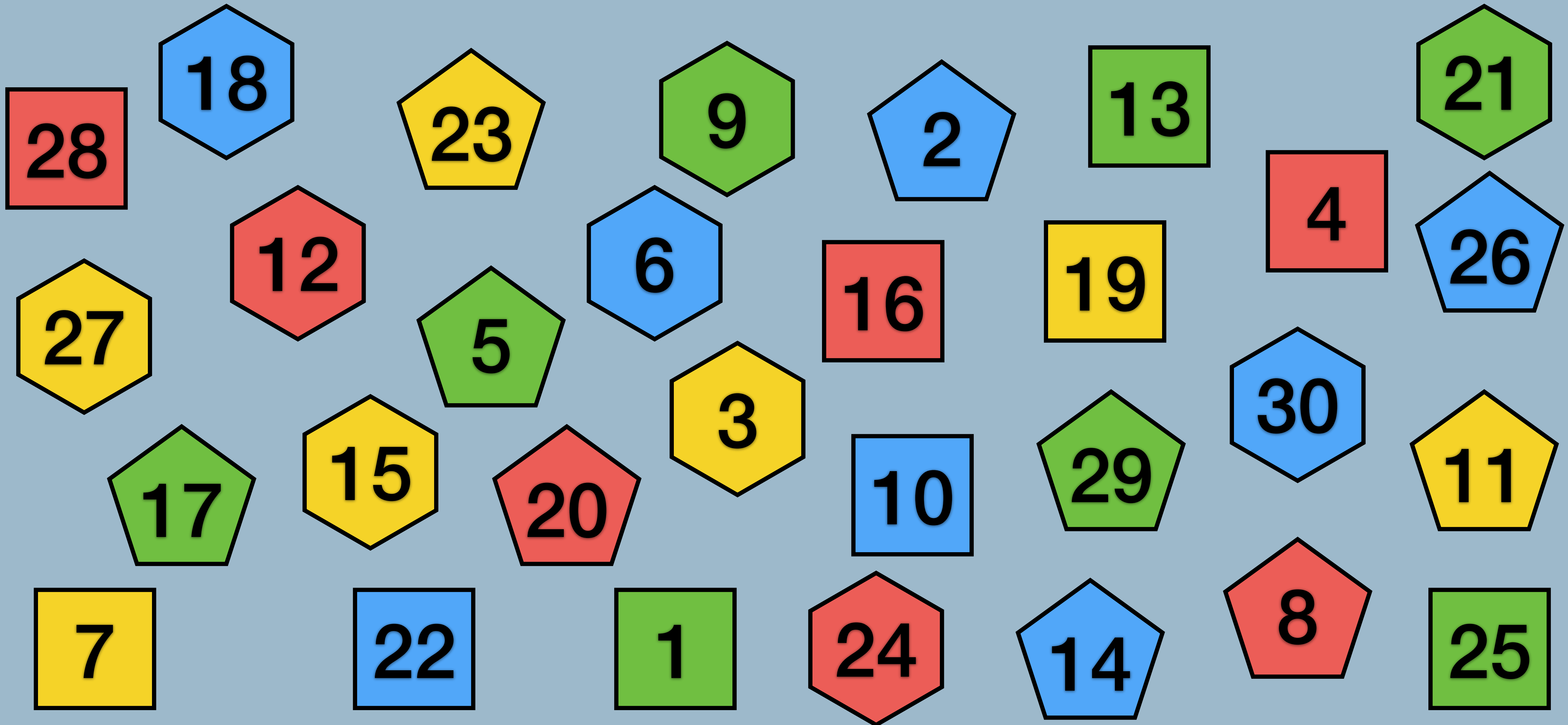


形形色色 的數字密碼

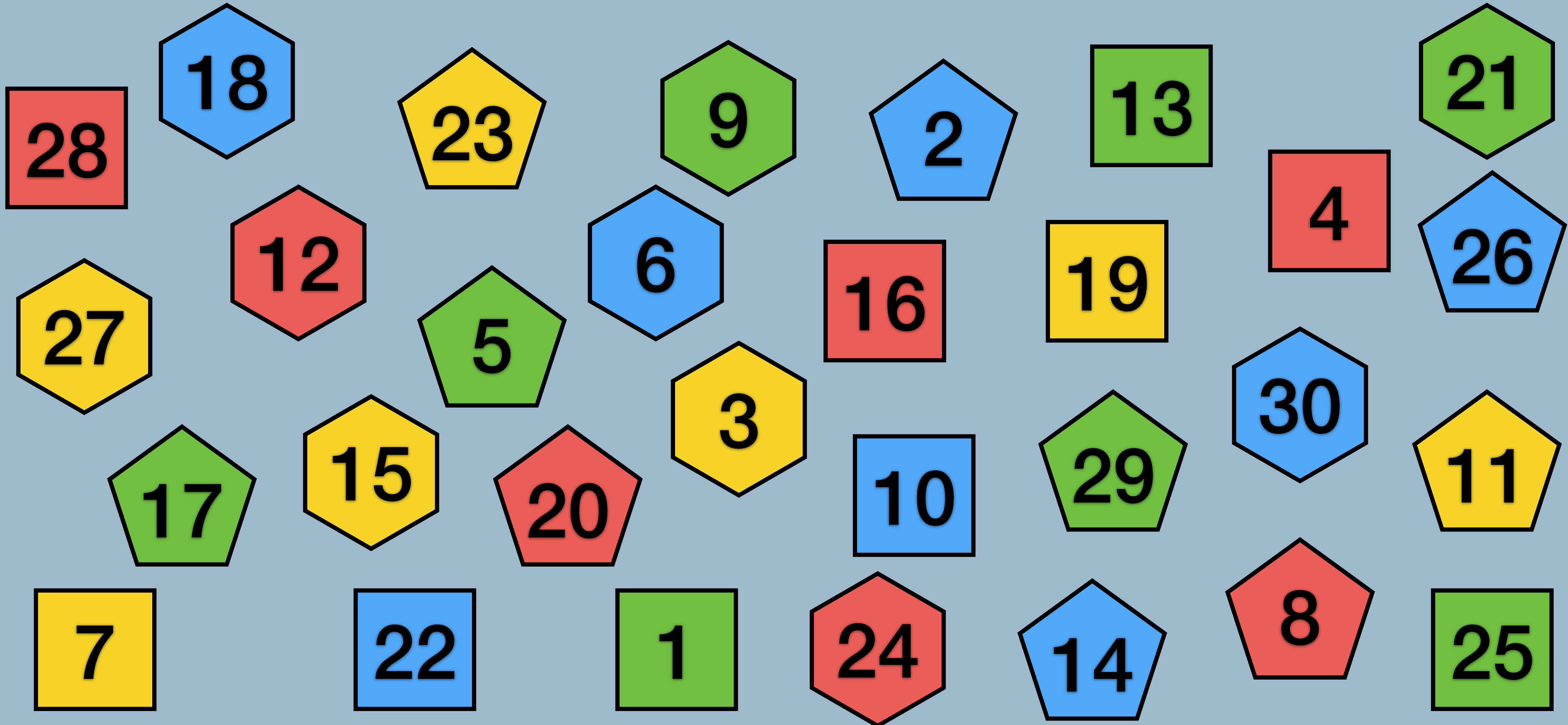
選兩張不同形狀的圖卡，計算總和



從這張圖你看到什麼？



選兩張不同形狀的圖卡，計算總和



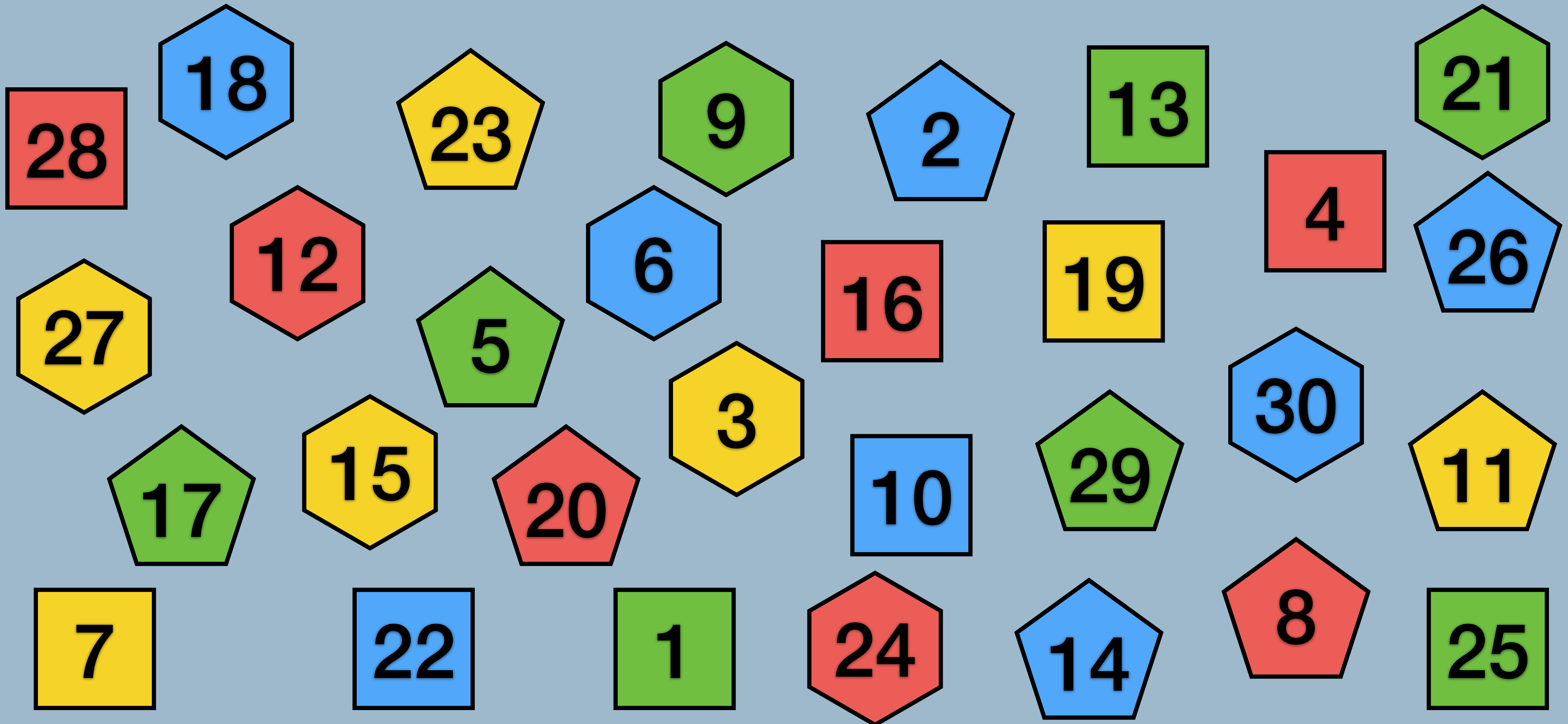
抽絲剥繭



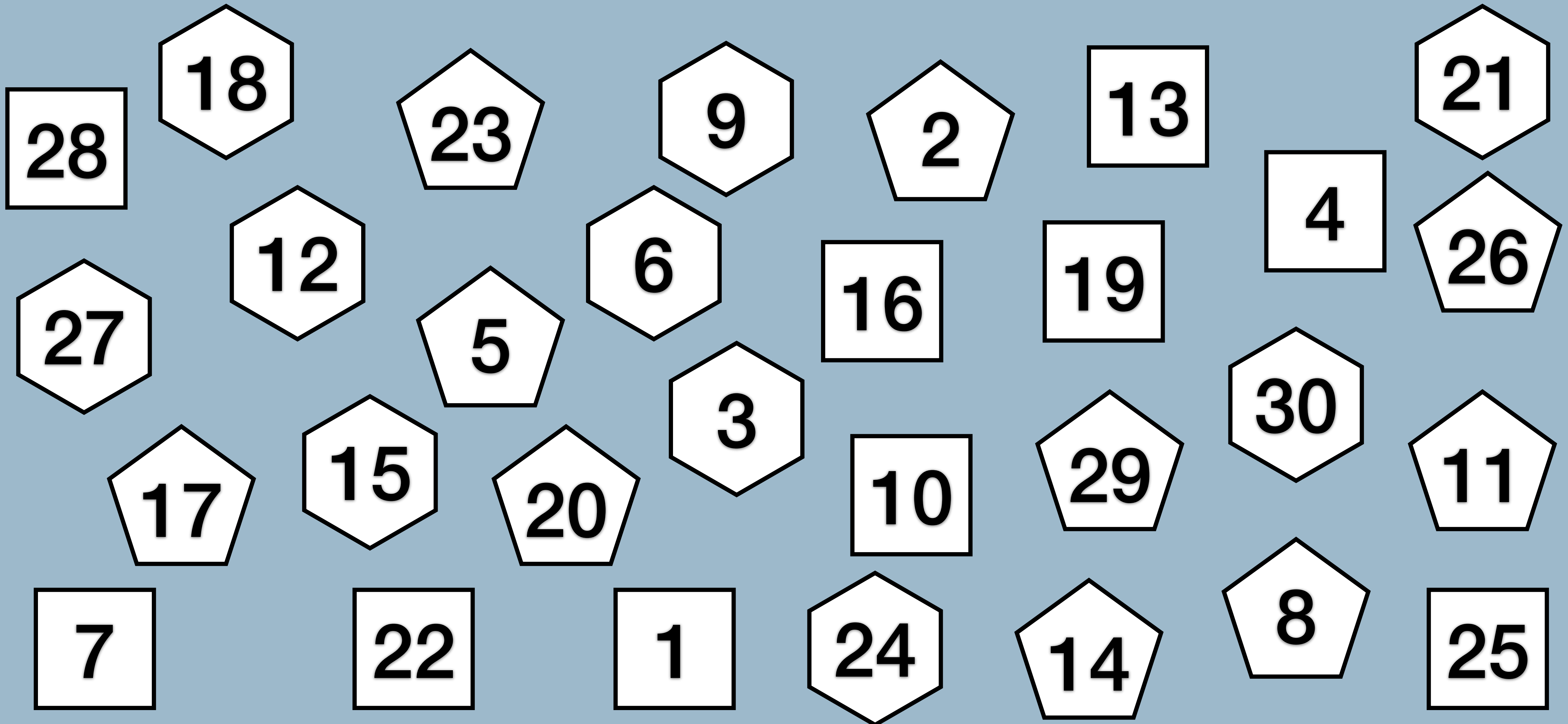
❖ 你覺得老師需要知道什麼？

❖ 你認為可能跟什麼有關係？

探討數字和形狀之間的關係？



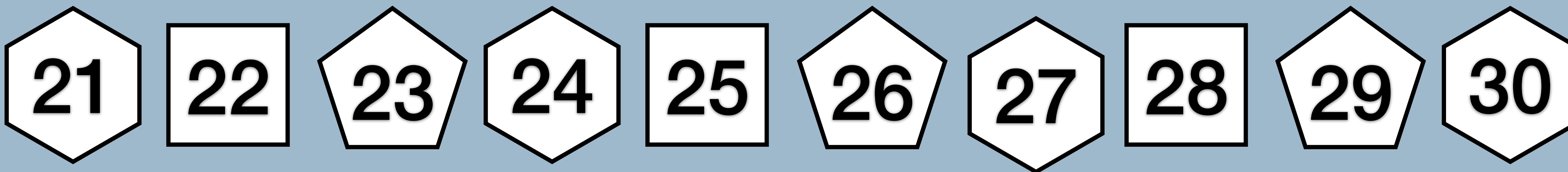
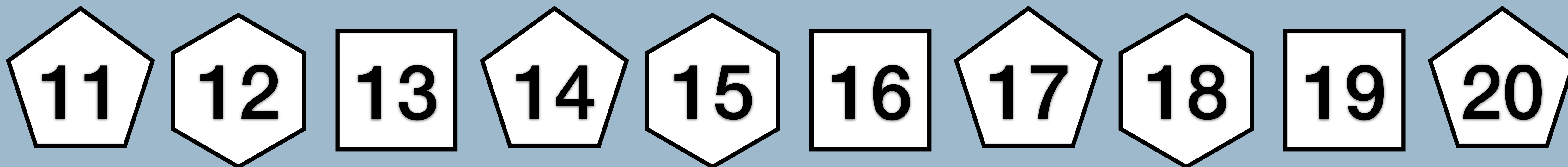
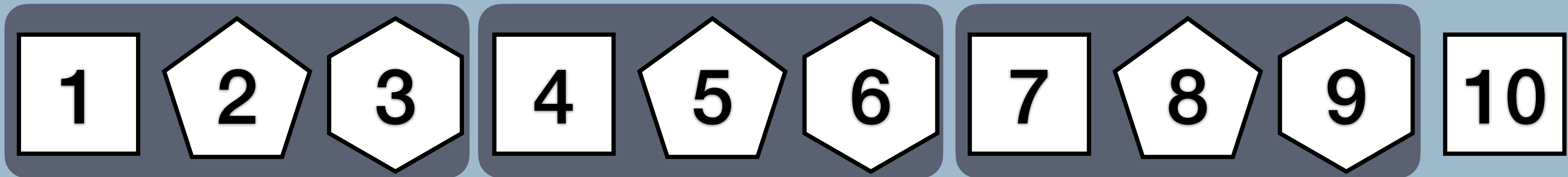
探討數字和形狀之間的關係？



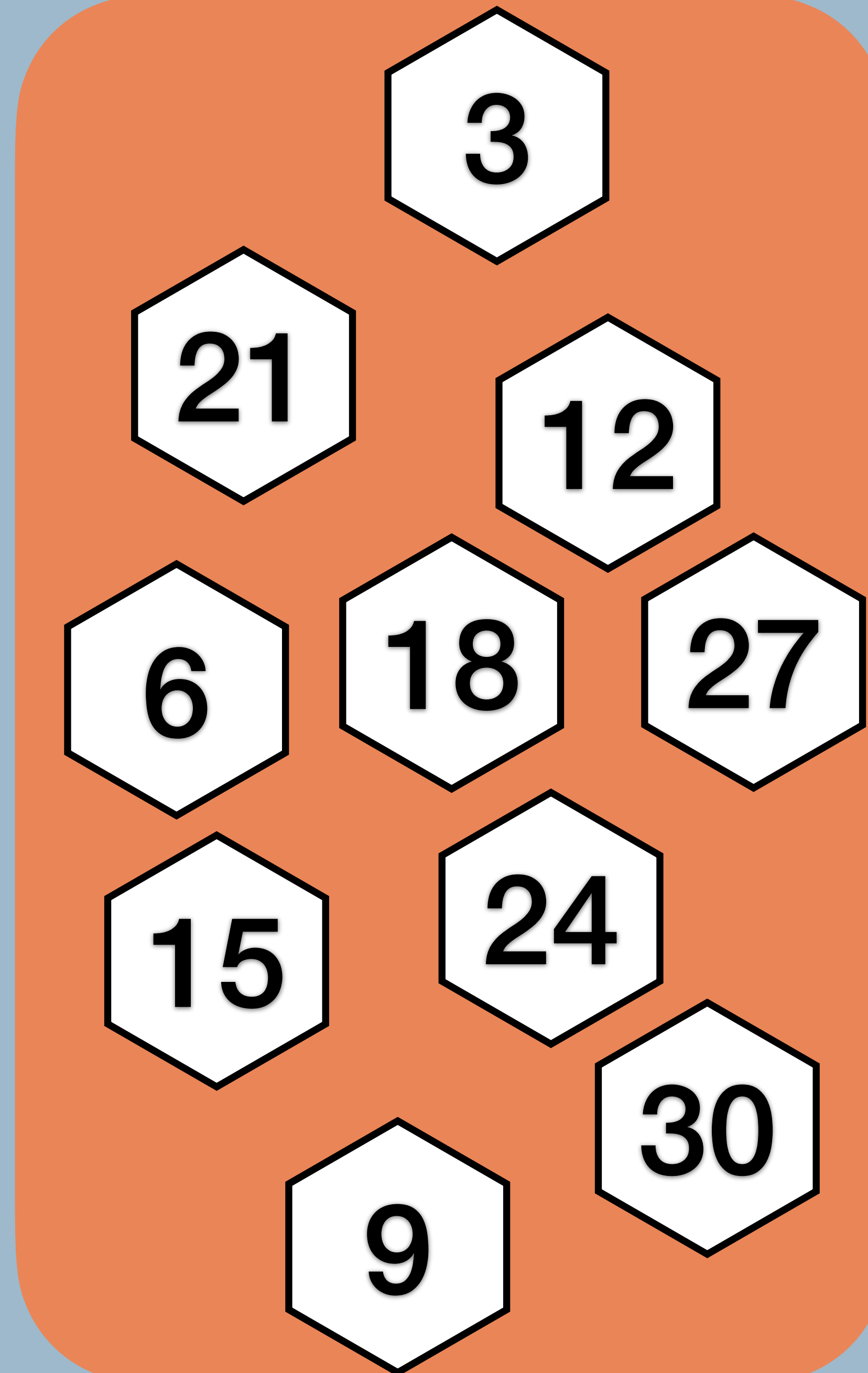
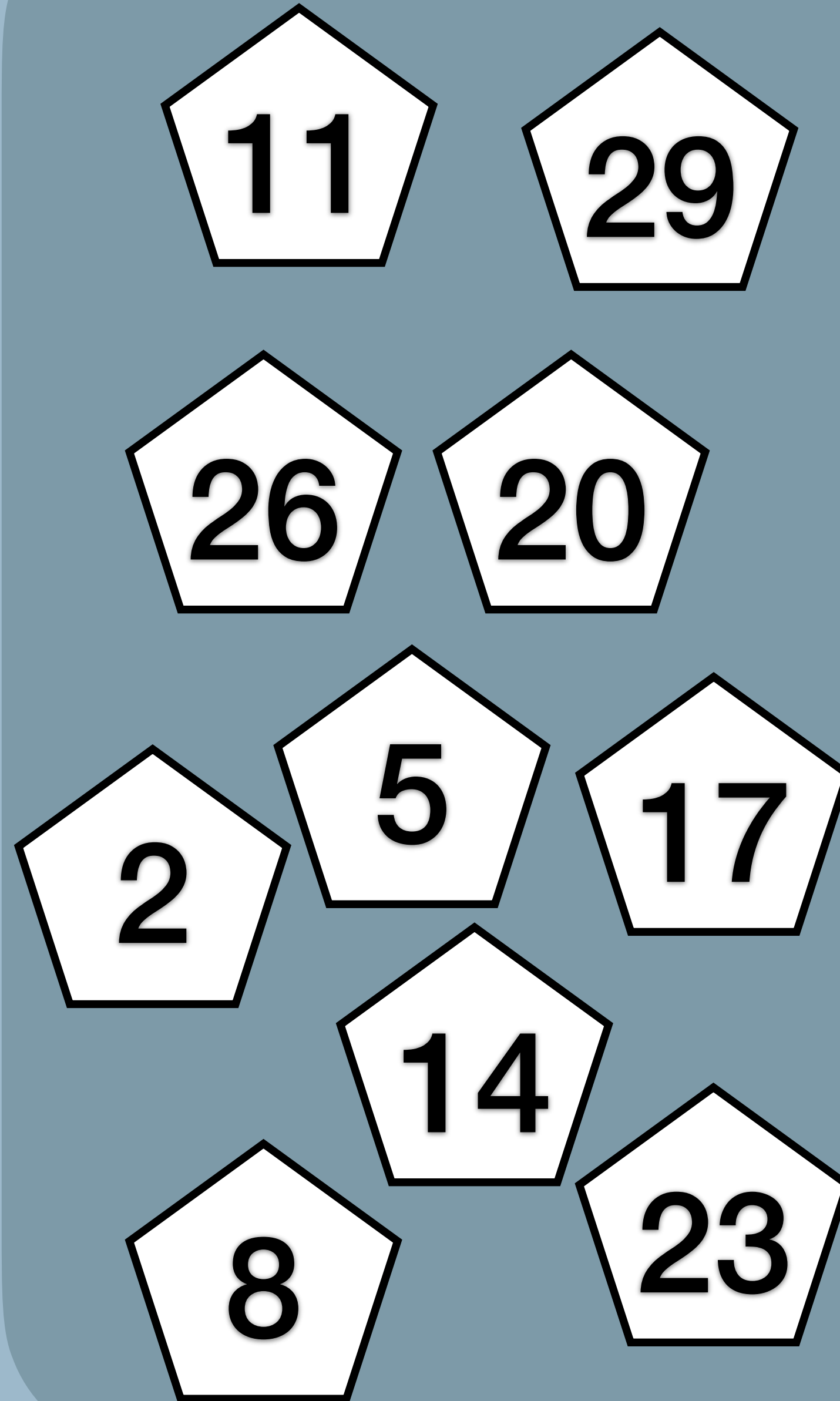
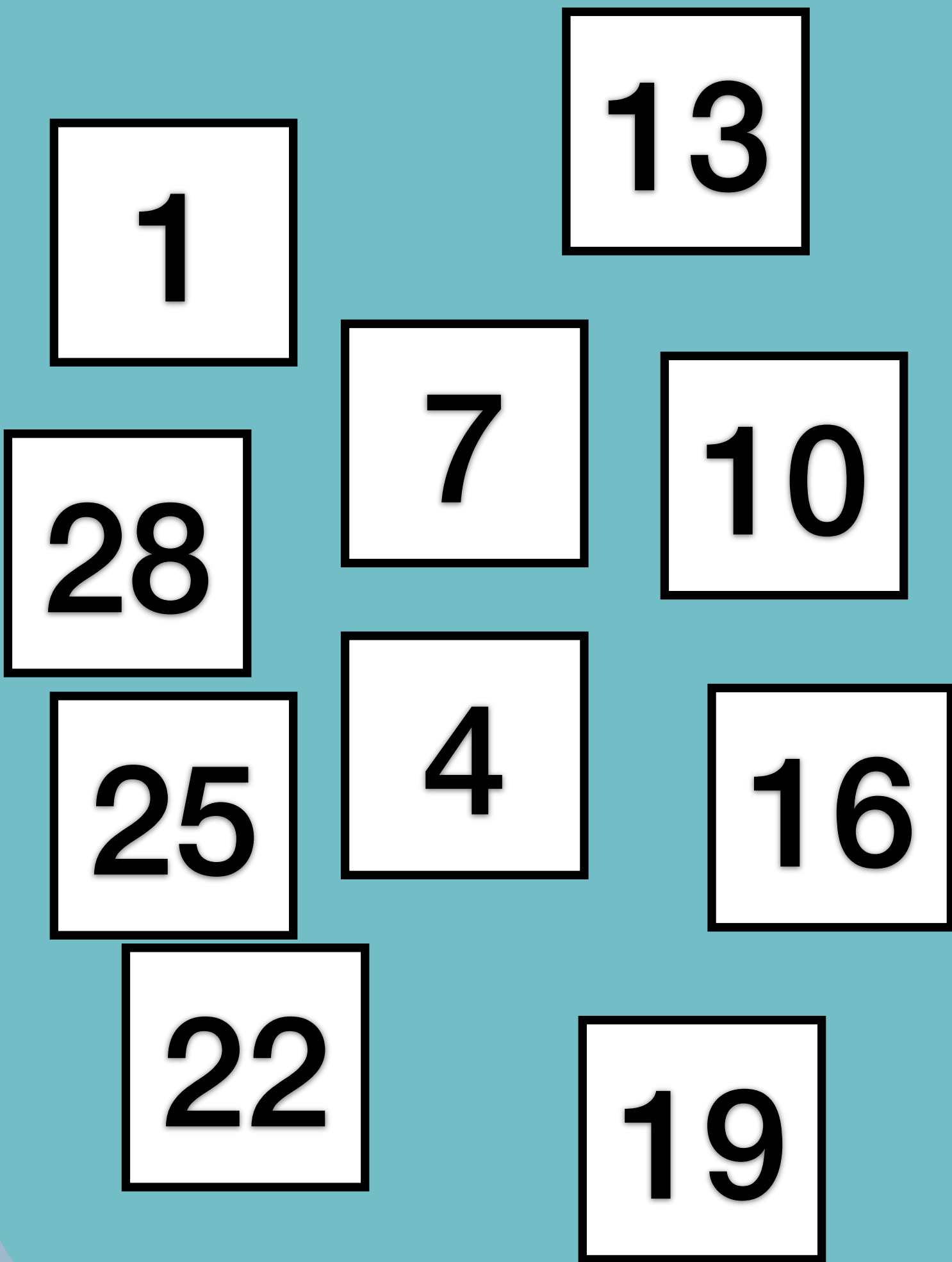
小組分工

- ❖ 利用桌上的卡牌進行討論
- ❖ 探討數字和形狀之間是不是有什麼關係
- ❖ 在變動中尋找其中的不變 (Pattern 規律)

排序？



分類？



永恆不變的**規律**。你發現了？

1 4 7 10 13 16 19 22 25 28

2 5 8 11 14 17 20 23 26 29

3 6 9 12 15 18 21 24 27 30

找到的規律

1 4 7 10 13 16 19 22 25 28

2 5 8 11 14 17 20 23 26 29

3 6 9 12 15 18 21 24 27 30

?

$$\div 3 = \dots\dots 1$$

?

$$\div 3 = \dots\dots 2$$

?

$$\div 3 = \dots\dots 0$$

換你試試看

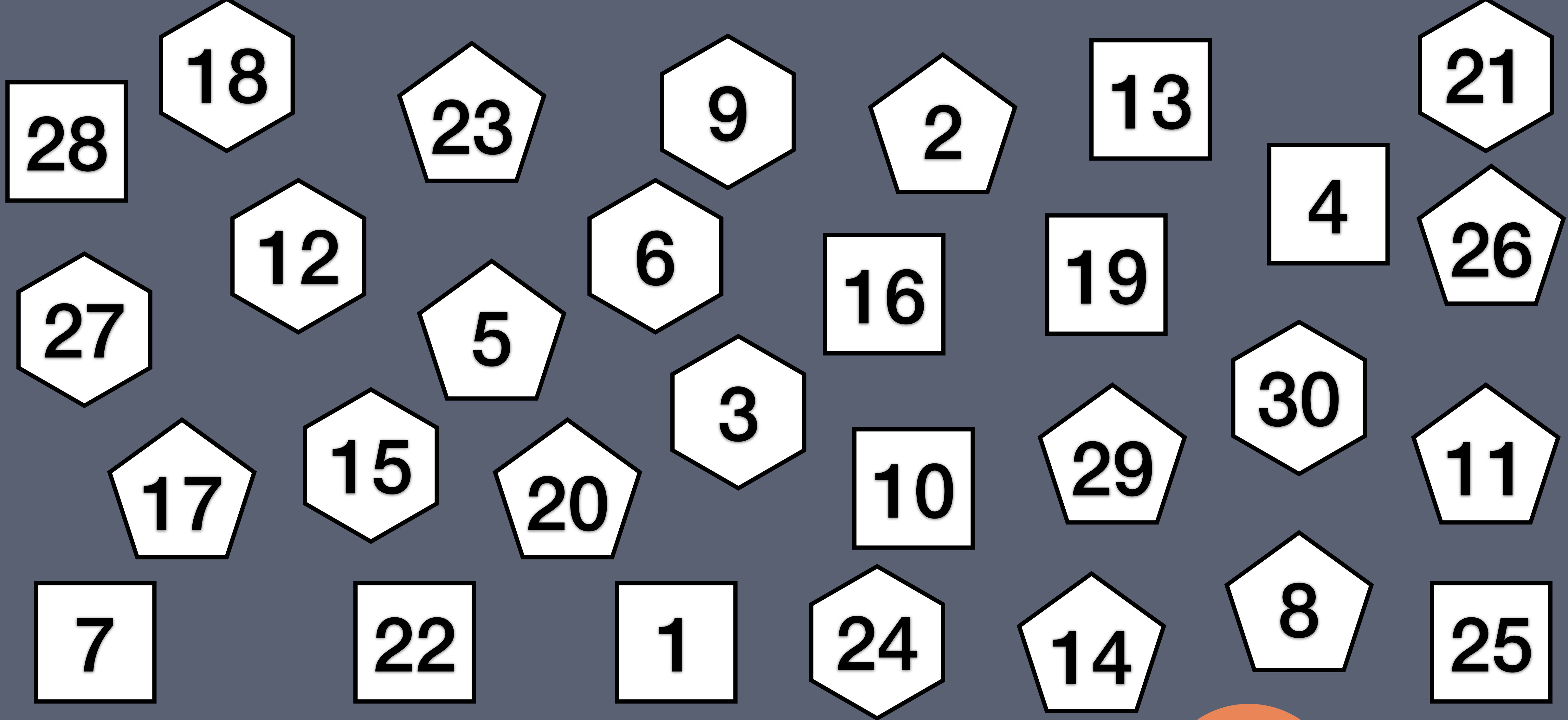
53

66

79

1000

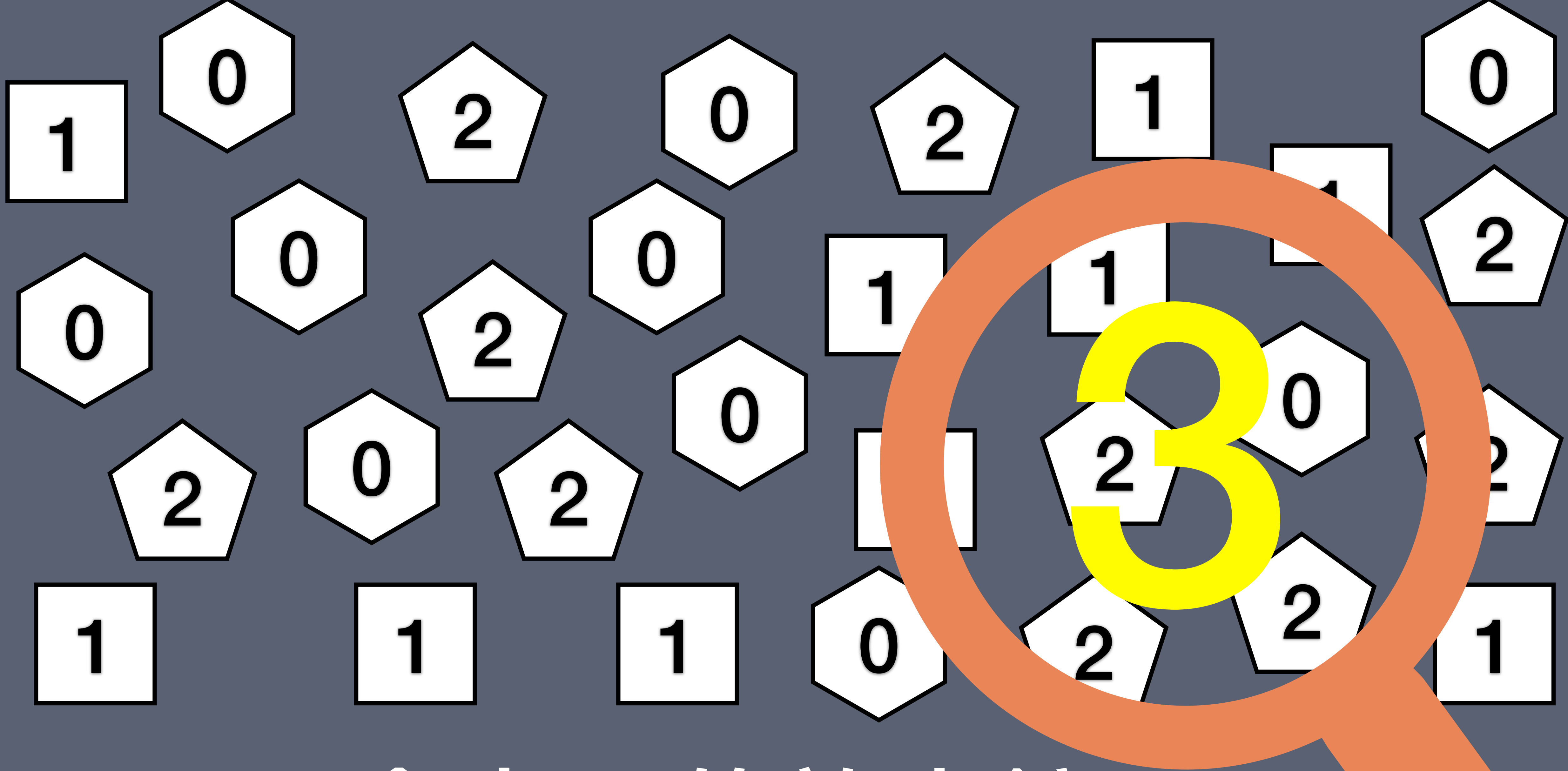
111



拿出 3 的放大鏡



3

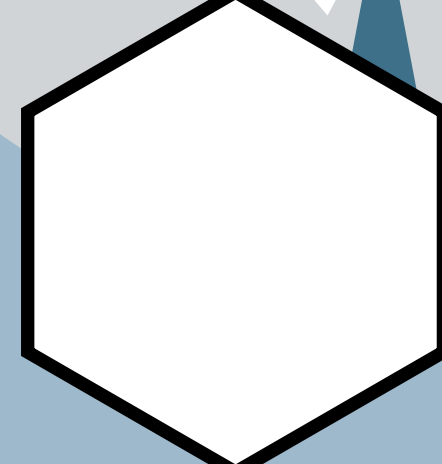
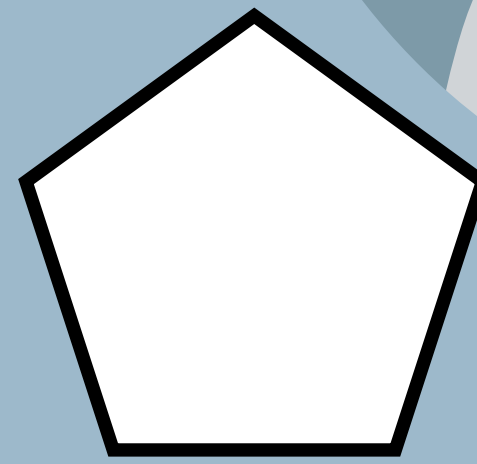
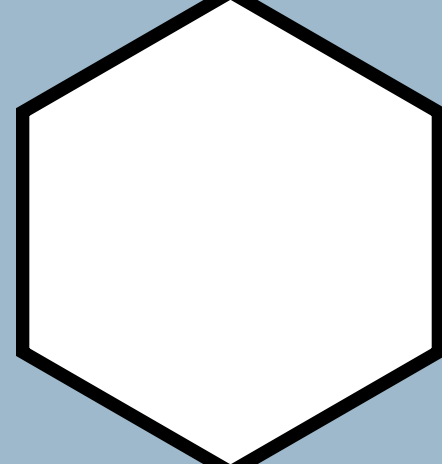
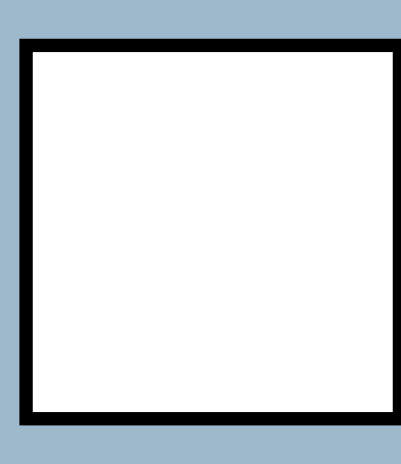
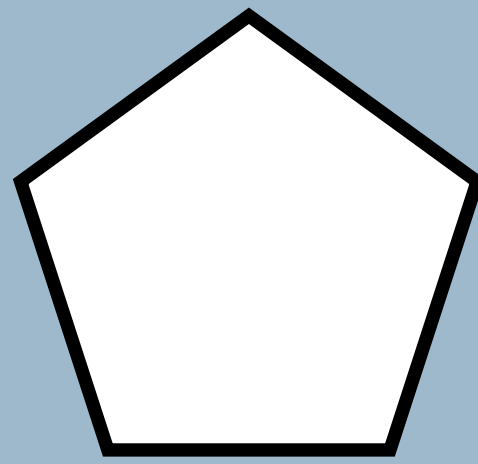
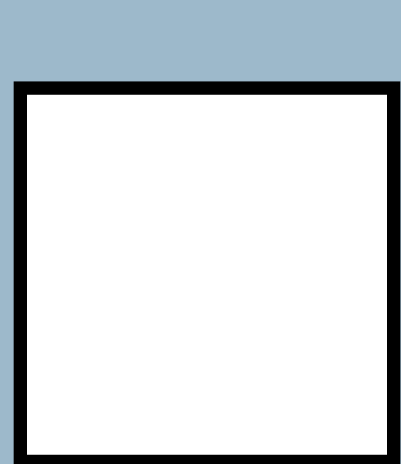


拿出 3 的放大鏡

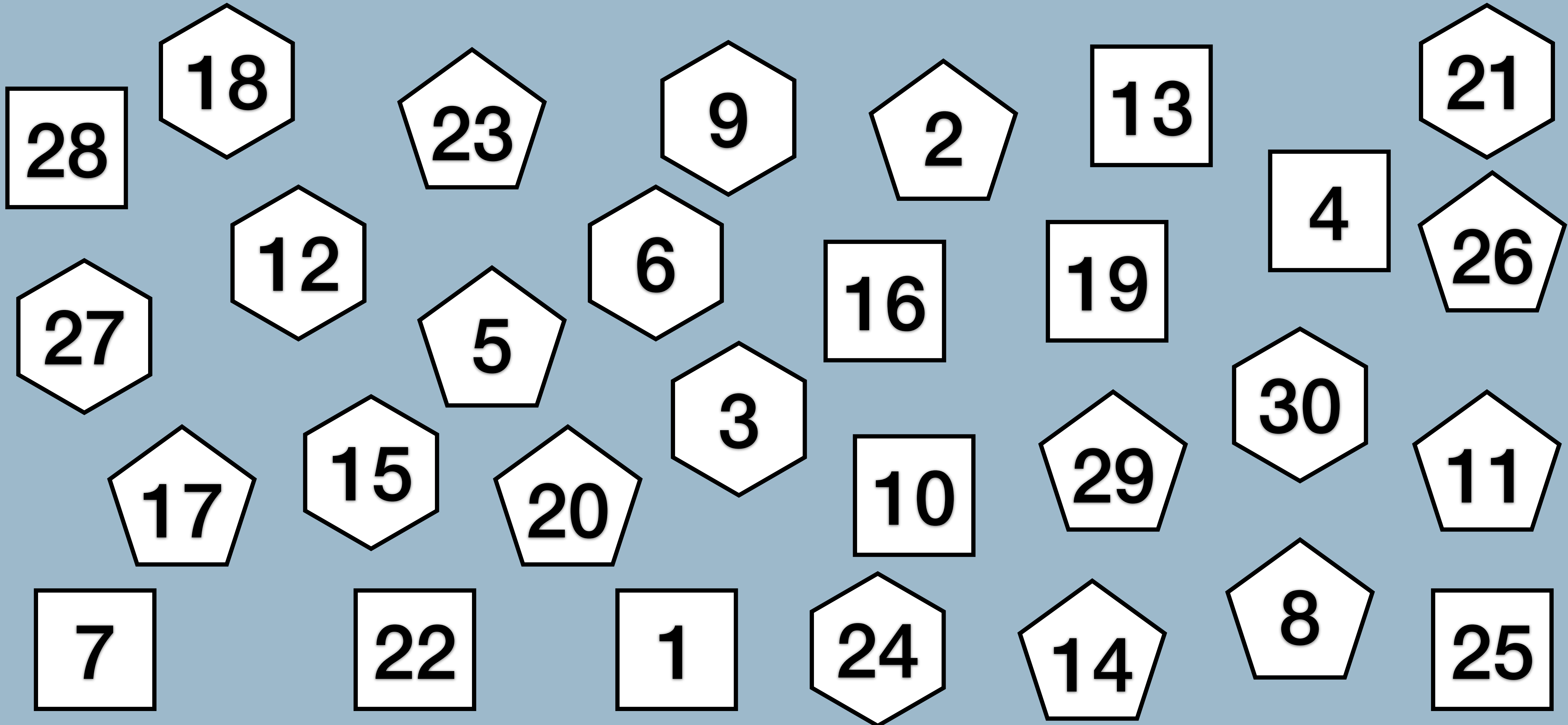
小組討論

Q：如何從兩個不同形狀的數字卡總和，來猜出是哪兩種圖形呢？

先想想：兩個不同形狀的組合有幾種？



從兩張不同形狀的數字卡，猜出圖形為何？



換我考考你

各組挑戰猜出老師選的形狀



數字除以3的餘數

$$\square ? \div 3 = \dots\dots 1$$

$$\square ? + \hexagon ? \dots\dots 1$$

$$\pentagon ? \div 3 = \dots\dots 2$$

$$\pentagon ? + \hexagon ? \dots\dots 2$$

$$\hexagon ? \div 3 = \dots\dots 0$$

$$\square ? + \pentagon ? \dots\dots 0$$

換你試試看

小組成員輪流擔任魔術師和觀眾



延伸想一想

Q：可不可以選兩個**相同形狀**來猜？



數字除以3的餘數

$$\boxed{?} \div 3 = \dots\dots 1$$

$$\boxed{?} + \boxed{?} \dots\dots 2$$

$$\text{pentagon } ? \div 3 = \dots\dots 2$$

$$\text{pentagon } ? + \text{pentagon } ? \dots\dots 1$$

$$\text{hexagon } ? \div 3 = \dots\dots 0$$

$$\text{hexagon } ? + \text{hexagon } ? \dots\dots 0$$

再換你試試看

小組成員輪流擔任魔術師和觀眾
選兩張相同形狀的
圖卡給別人猜猜看



延伸想一想

Q1：可不可以選三個**相同形狀**來猜？

Q2：可不可以選三個**不同形狀**來猜？

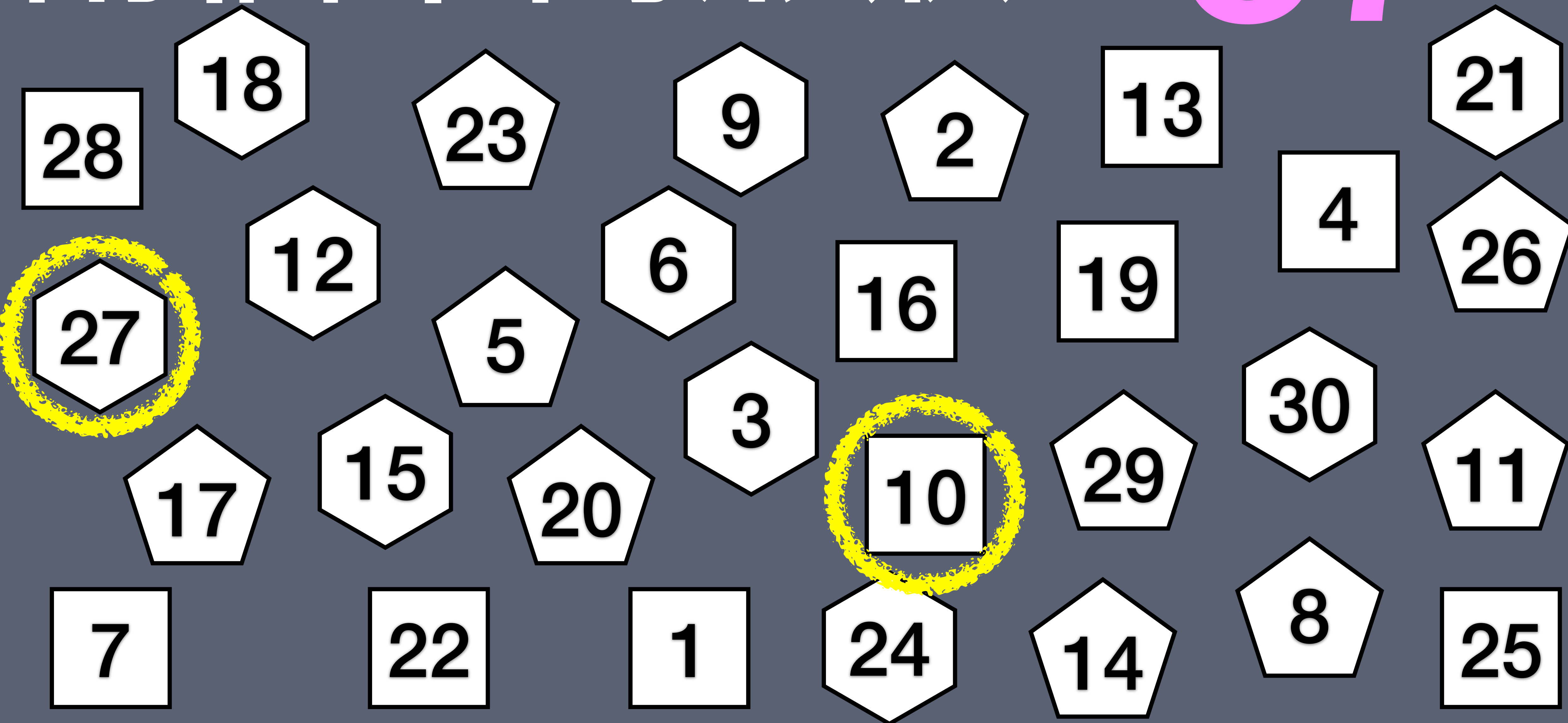


全班終極 大挑戰



兩個不同形狀

37



兩個不同形狀

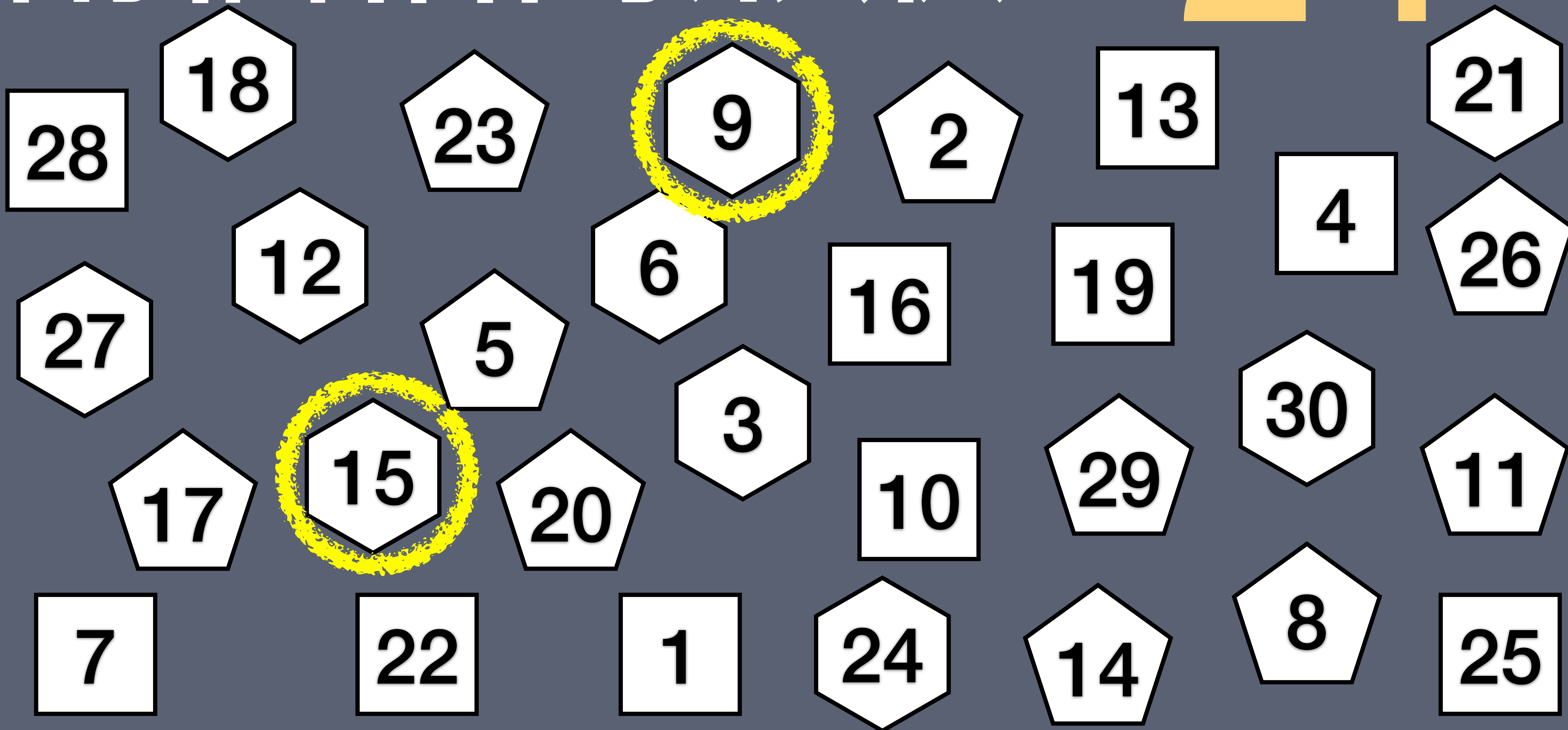
32

A collection of 32 numbered shapes arranged in a grid. The shapes are squares, pentagons, and hexagons. The numbers are: 28, 18, 23, 9, 2, 13, 21, 27, 12, 6, 16, 19, 4, 26, 17, 5, 3, 10, 29, 30, 11, 7, 22, 1, 24, 14, 8, 25. The shapes 24 and 8 are highlighted with a yellow brushstroke.

28	18	23	9	2	13	21
27	12	6	16	19	4	26
17	5	3	10	29	30	11
7	22	1	24	14	8	25

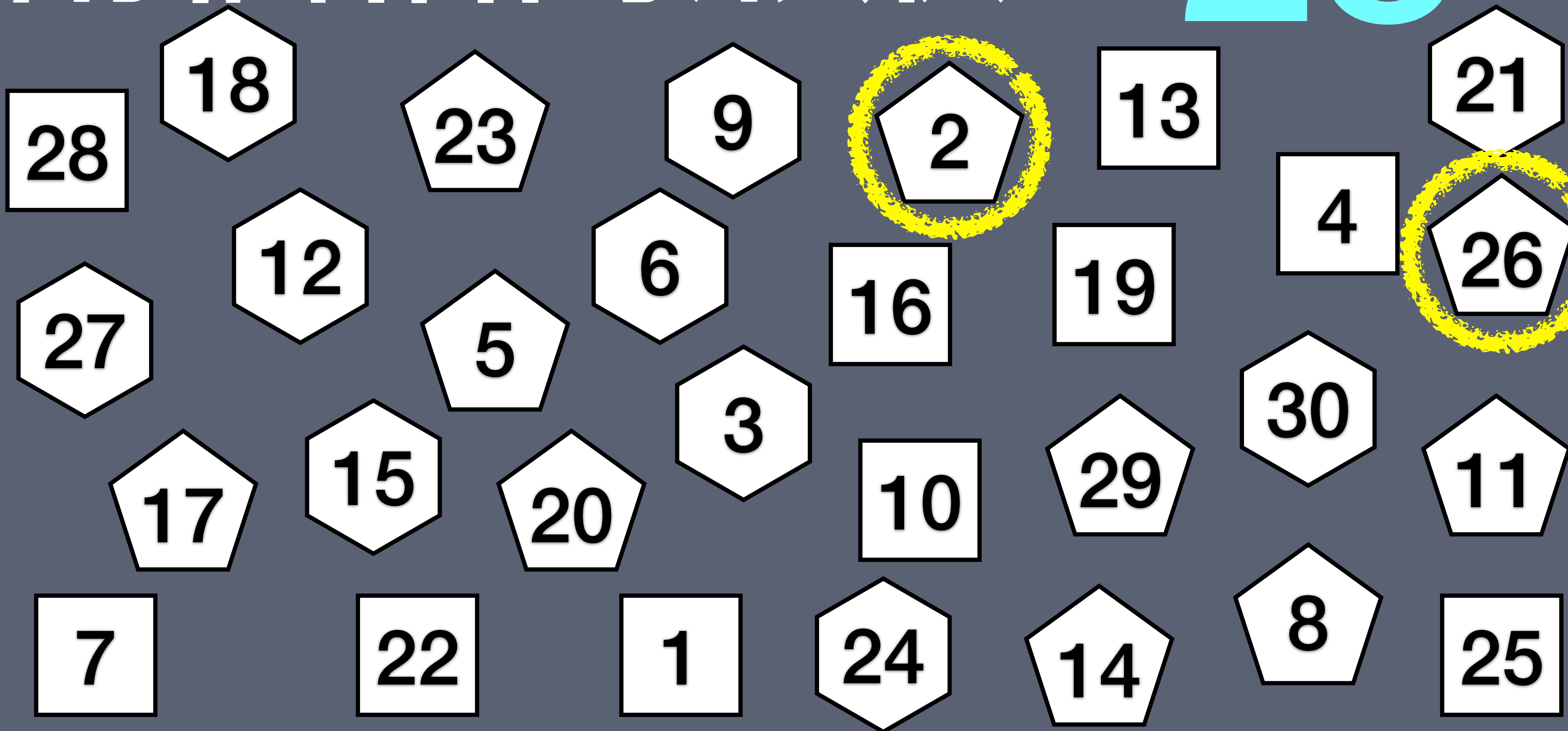
兩個相同形狀

24

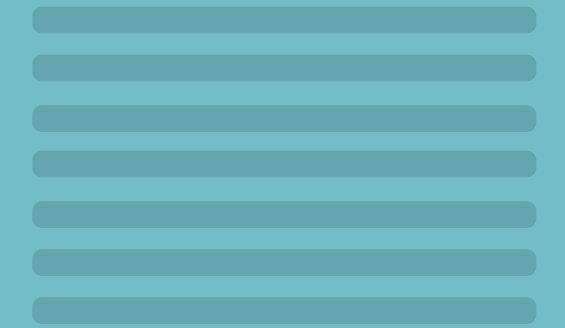
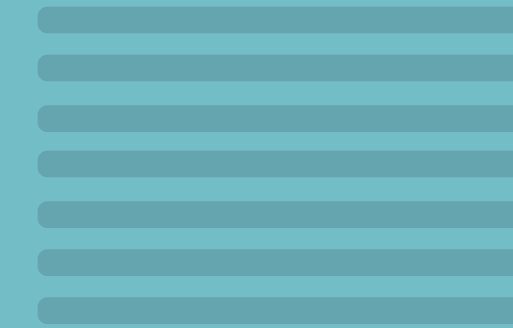
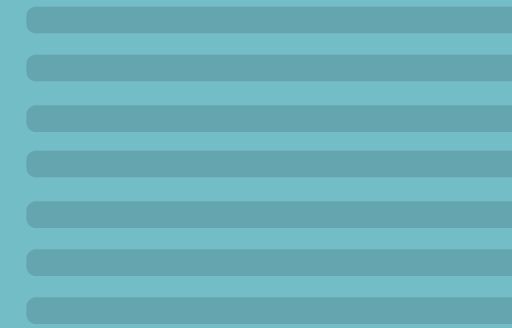


兩個相同形狀

28

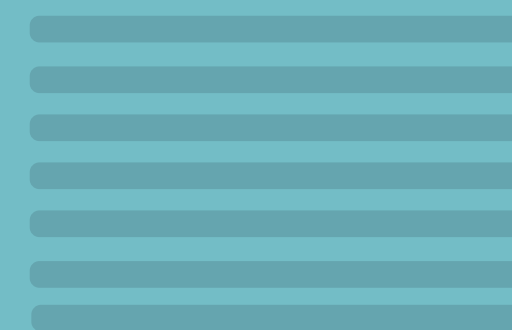


今日快餐



❖ 回家擔任魔術師與家人互動。

❖ 與家人探討顏色和數字之間的關係。



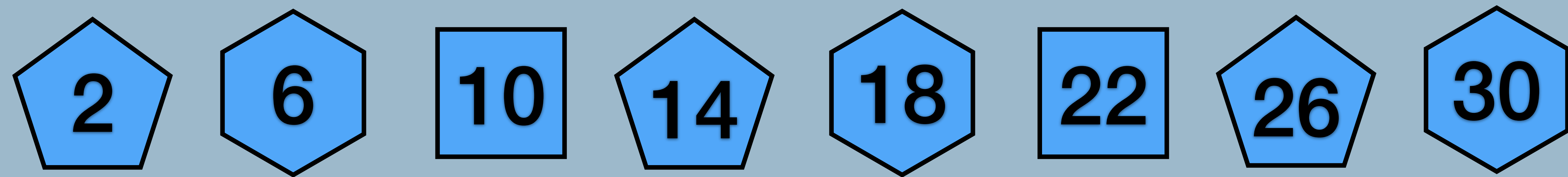
數字密碼3.0



選三張不同顏色的圖卡，計算總和

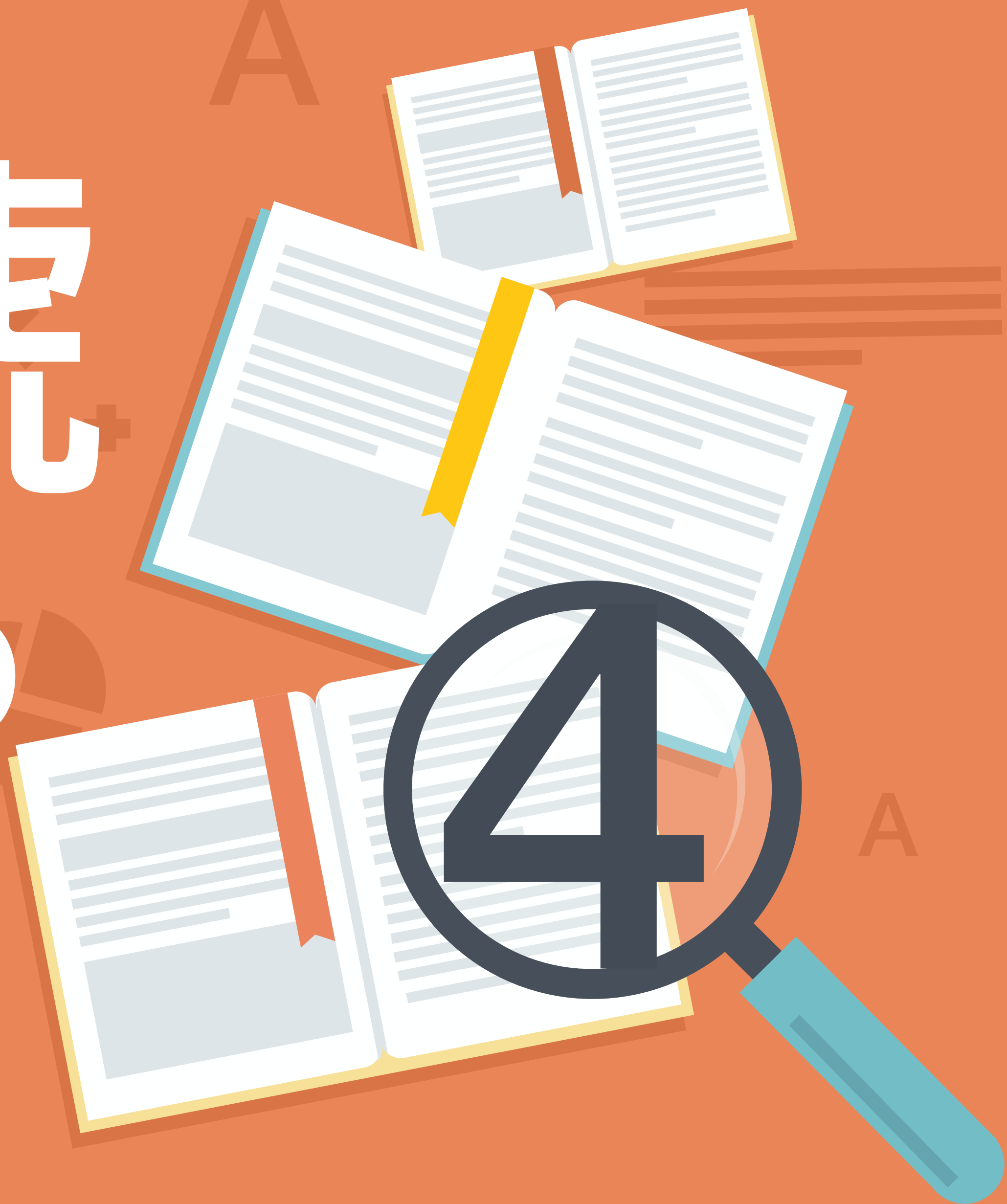
綠 藍 黃 紅

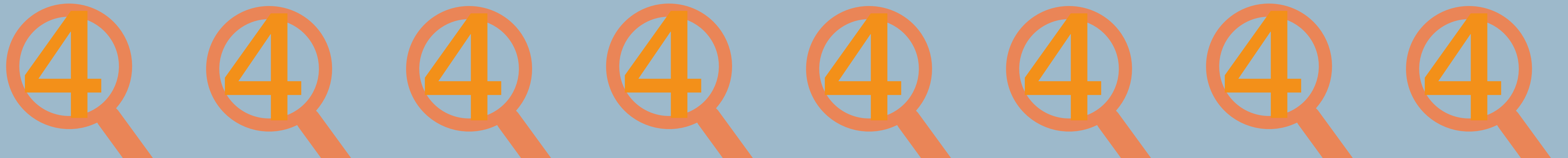
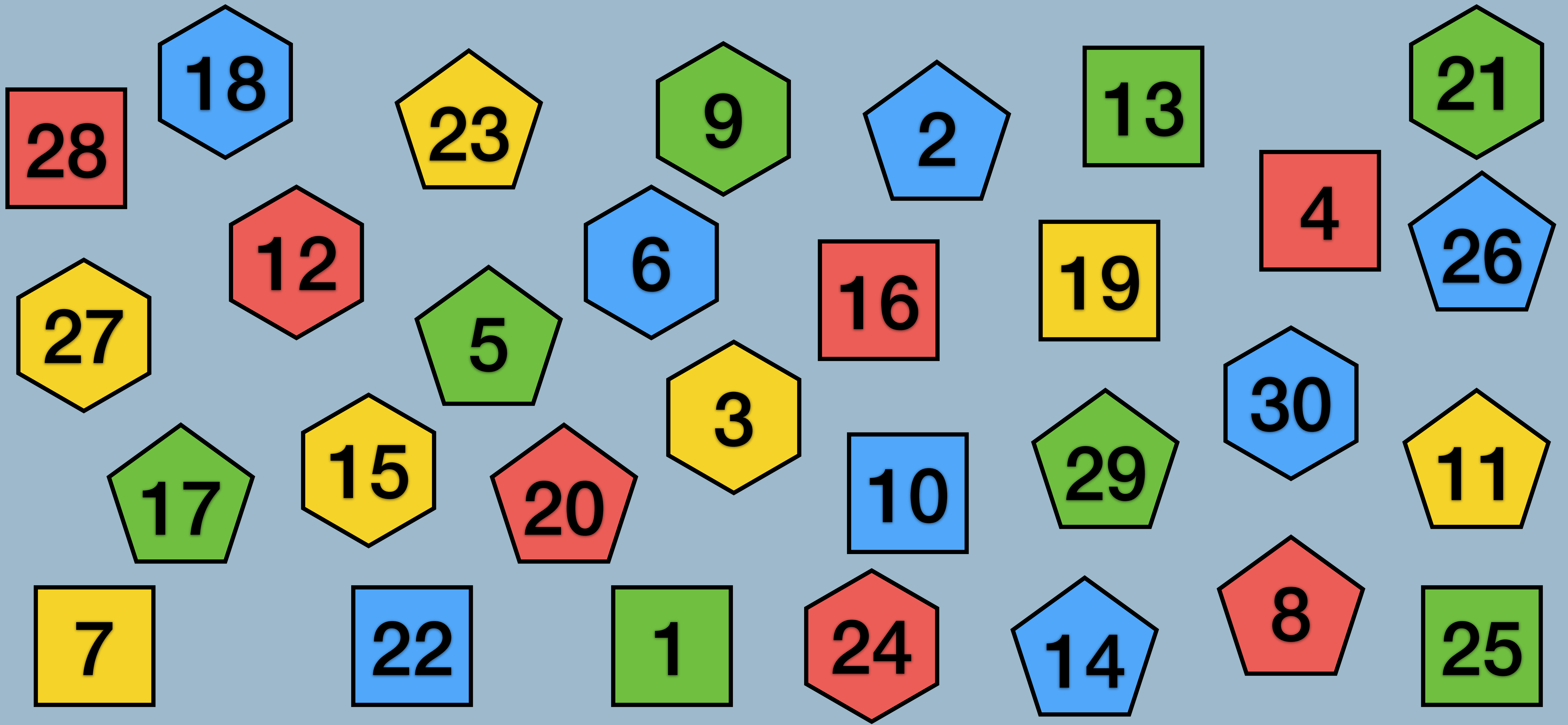
Color	Shape	Number
Red	Square	28
Blue	Hexagon	18
Yellow	Pentagon	23
Green	Hexagon	9
Blue	Pentagon	2
Green	Square	13
Green	Hexagon	21
Yellow	Hexagon	27
Red	Hexagon	12
Green	Pentagon	5
Blue	Hexagon	6
Red	Square	16
Yellow	Square	19
Red	Square	4
Blue	Pentagon	26
Green	Pentagon	17
Yellow	Hexagon	15
Red	Pentagon	20
Yellow	Hexagon	3
Blue	Square	10
Green	Pentagon	29
Blue	Hexagon	30
Yellow	Pentagon	11
Yellow	Square	7
Blue	Square	22
Green	Square	1
Red	Hexagon	24
Blue	Pentagon	14
Red	Pentagon	8
Green	Square	25



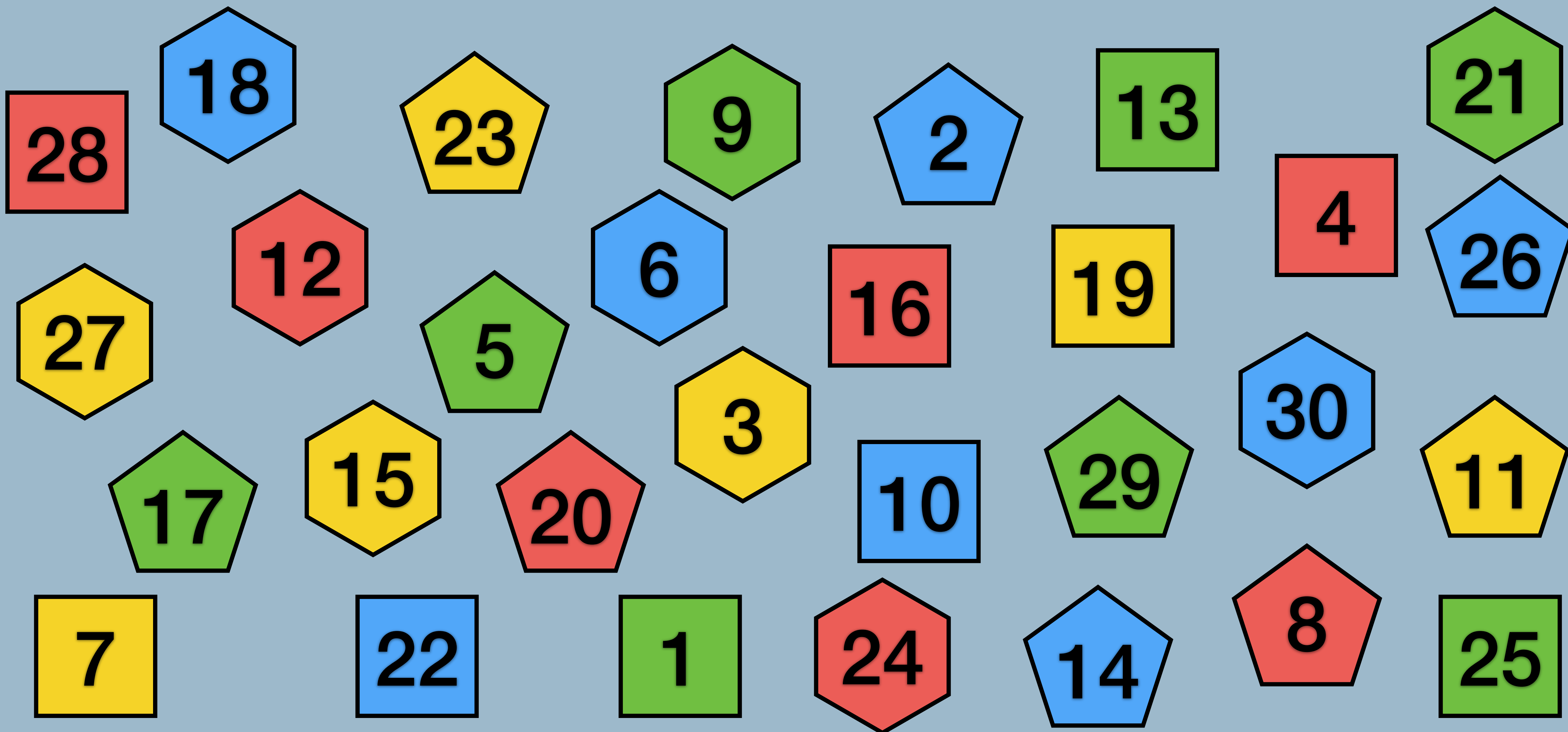
排序
分類

拿出幾號
放大鏡?

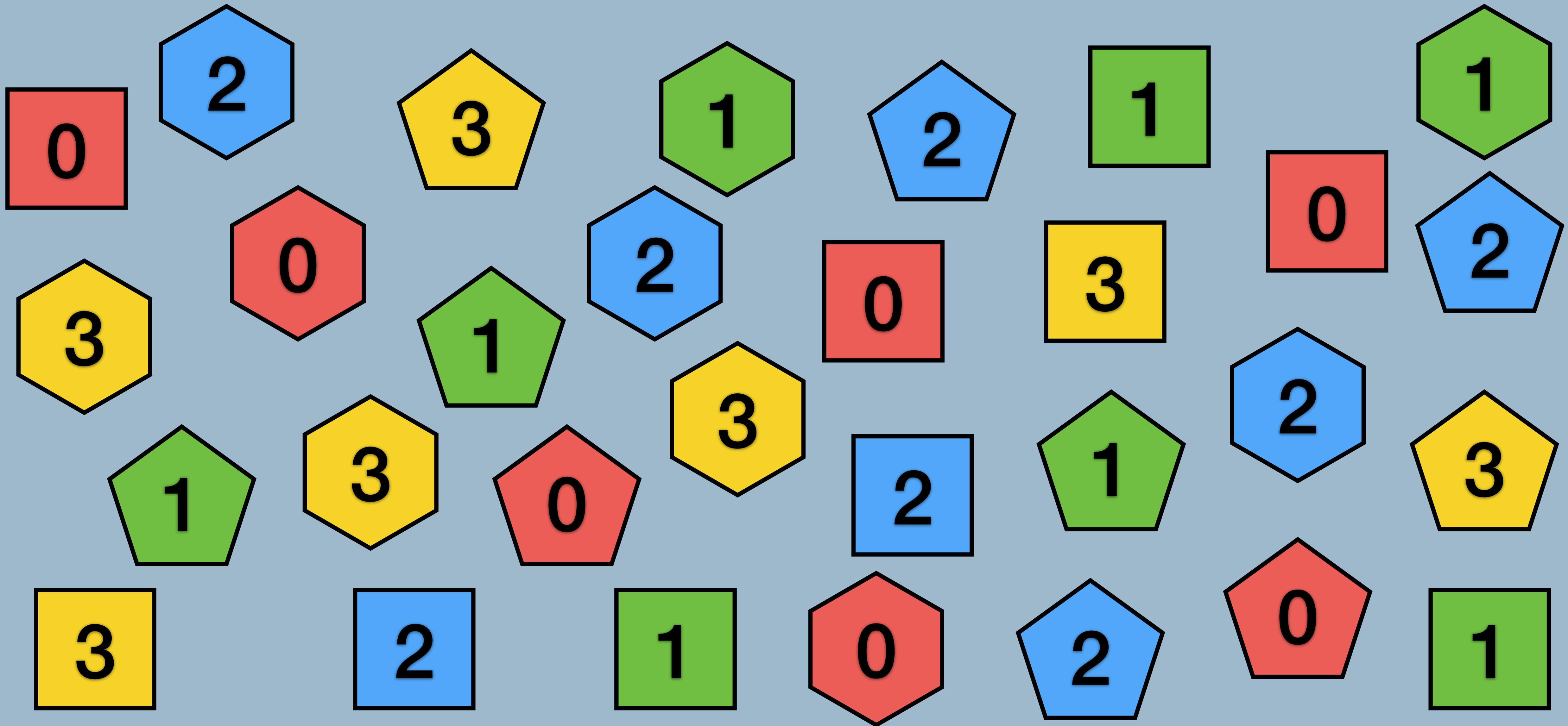




原本你看到的數字密碼卡！



最後你看到的數字都會變成這樣！



2 + 3 + 0 -> 餘1

1 + 2 + 3 -> 餘2

1 + 2 + 0 -> 餘3

1 + 3 + 0 -> 餘0

綠

紅

黃

藍

力

宏

很

懶

全體大挑戰

A



C



N



餘 1 餘 2 餘 3 餘 0

猜猜看是哪三個顏色？

32

28 18 23 9 2 13 21

27 12 6 16 19 4 26

17 15 5 3 10 29 30 11

7 22 1 24 14 8 25

餘 1 餘 2 餘 3 餘 0

猜猜看是哪三個顏色？

51

28 18 23 9 2 13 21

27 12 6 16 19 4 26

17 5 3 10 29 30 11

7 15 20 1 24 14 8 25

22