

小六數學溫習摘要

Primary 6 Mathematics Revision Summary

6D3 圓形圖

6D3 Pie Charts

圓形圖把一個整體分成若干扇形，以各部分的比例顯示分布；先找整體，才把比例換成實際數量。

A pie chart divides a whole into sectors. Identify the whole before converting each share into an amount.

學習重點

What to learn

- 整個圖表示全部數據，即 100%；所有扇形圓心角合共是 360° 。
The whole circle represents 100%, with sector angles adding to 360° .
- 某扇形的圓心角佔 360° 的幾分之幾，該類數量就佔整體相同的比例。
A sector's fraction of 360° equals its fraction of the whole quantity.
- 已知總數和比例，可用總數乘所佔分數或百分數求該類數量。
Multiply the total by a sector's fraction or percentage to find its amount.
- 同一圓形圖內，可把幾個互不重疊類別的比例相加，或用比例的差比較數量差。
Within one chart, combine non-overlapping shares or use their difference to compare amounts.

考試前必記

Remember before a test

- 讀圖先查看圖題、分類名稱、圖例及總數；總數未知時，通常只能比較比例。
Check title, category labels, key and total. Without a total, comparisons usually concern proportions only.
- 若一部分未標比例，可用 100% 減其餘百分數之和，或用 360° 減其餘角度之和。
Find a missing share by subtracting the others from 100% or their angles from 360° .
- 比較不同圓形圖時，百分數較高不一定表示實際數量較多，因為總數可能不同。
A larger percentage in another chart need not represent a larger amount if the totals differ.
- 百分數和角度要配對使用：例如 30% 對應 108° ，因為 $360^\circ \times 30\% = 108^\circ$ 。
Link angle and share correctly: 30% corresponds to 108° .

常見錯誤

Common mistakes

- 把扇形角度直接當作數量，例如把 90° 當作 90 人。
Treating an angle as an amount, such as reading 90° as 90 people.
- 計算比例時用 180° 作整體，忘記圓形圖是一整圈。
Using 180° instead of the full 360° .
- 不同總數的圓形圖只比較扇形大小，便斷定實際數量的多少。
Comparing sector sizes across different totals as if they were actual counts.
- 把有重疊的分類當成互不重疊部分相加，或沒有檢查合共是否 100%。
Adding overlapping categories or failing to check that the whole is 100%.

快速自查

Quick check

☐ 能辨認整體和各分類 I can identify the whole and categories.	☐ 能把角度換成所佔比例 I can convert sector angles to shares.
☐ 能由總數求分類數量 I can find amounts from a known total.	☐ 能求缺少的百分數或角度 I can find a missing share or angle.

自編例題

Original worked example

義賣活動有 240 件作品，陶藝佔 35%，繪畫佔 45%，其餘是布藝。布藝有多少件？

A charity sale has 240 craft items: 35% are pottery, 45% are paintings, and the rest are fabric crafts. How many fabric crafts are there?

思考與解答：布藝佔 $100\% - 35\% - 45\% = 20\%$ ； $240 \times 20\% = 48$ 件。

Reasoning and answer: Fabric crafts account for $100\% - 35\% - 45\% = 20\%$; $240 \times 20\% = 48$ items.

再試與答案：同一活動中，一個類別佔 72° ，有多少件？答案： $240 \times 72/360 = 48$ 件。

Further practice and answer: At the same sale, one category occupies a 72° sector. How many items are in it? Answer: $240 \times 72/360 = 48$ items.