

小六數學溫習摘要

Primary 6 Mathematics Revision Summary

6M1 角（度）

6M1 Angles in Degrees

用度表示轉動的大小，並用量角器量角和畫角。判斷角度時，看兩邊張開的幅度，不看邊長。

Measure turning in degrees. Use a protractor to measure and draw angles; arm length does not determine angle size.

學習重點

What to learn

- 一整圈是 360° ，半圈是 180° ，四分之一圈是 90° 。
A full turn is 360° , half a turn is 180° and a quarter turn is 90° .
- 銳角大於 0° 而小於 90° ；直角是 90° ；鈍角大於 90° 而小於 180° 。
An acute angle is between 0° and 90° , a right angle is 90° , and an obtuse angle is between 90° and 180° .
- 平角是 180° ；反角大於 180° 而小於 360° ；周角是 360° 。
A straight angle is 180° , a reflex angle is between 180° and 360° , and a full angle is 360° .
- 用三個字母記角時，中間字母表示頂點，例如 $\angle PQR$ 的頂點是 Q。
The middle letter names the vertex: the vertex of $\angle PQR$ is Q.

考試前必記

Remember before a test

- 量角器中心放在頂點，一邊對準 0° 線；由該邊的 0° 開始，沿同一套刻度讀到另一邊。
Place the centre on the vertex, align one arm with zero and read the scale that starts at that zero.
- 先估計是銳角還是鈍角，可避免把內外圈刻度讀反。
Estimate acute or obtuse first to help choose the correct scale.
- 畫角時先畫一條邊，放好量角器並標示度數位置，再連接頂點和標記。
Draw one arm, position the protractor, mark the required degree and join that mark to the vertex.
- 量反角可先量同一對邊夾着的較小角，再用 360° 減去它；圖上要清楚標示所指的角。
For a reflex angle, subtract the smaller angle from 360° and mark clearly which angle is intended.

常見錯誤

Common mistakes

- 把量角器的邊緣而非中心放在角的頂點。
Placing the protractor's edge, rather than its centre, on the vertex.
- 從錯誤的 0° 開始讀數，或讀到一半轉用另一套刻度。
Starting at the wrong zero or switching between scales.
- 把較長的兩條邊誤認為形成較大的角。
Assuming longer arms make a larger angle.
- 求反角時用 180° 減去小角，或漏寫度數符號。
Subtracting from 180° instead of 360° for a reflex angle, or omitting $^\circ$.

快速自查

Quick check

☐ 能按度數判別角的種類 I can classify an angle by its measure.	☐ 能選對量角器刻度 I can select the correct protractor scale.
☐ 能畫出指定大小的角 I can draw an angle of a given size.	☐ 能求出同一對邊的反角 I can find the corresponding reflex angle.

自編例題

Original worked example

兩條射線形成的較小角是 128° 。較小角屬哪一類？同一對射線形成的反角是多少？

The smaller angle formed by two rays is 128° . What type of angle is it? Find the reflex angle formed by the same rays.

思考與解答： $90^\circ < 128^\circ < 180^\circ$ ，所以是鈍角；反角是 $360^\circ - 128^\circ = 232^\circ$ 。

Reasoning and answer: $90^\circ < 128^\circ < 180^\circ$, so it is an obtuse angle. The reflex angle is $360^\circ - 128^\circ = 232^\circ$.

再試與答案：畫出 52° 的角前，應估計它是甚麼角？答案：銳角；讀成 128° 表示可能用錯刻度。

Further practice and answer: Before drawing a 52° angle, what type of angle should you expect? Answer: an acute angle. A reading of 128° may mean that you used the wrong scale.