

小五數學溫習摘要

Primary 5 Mathematics Revision Summary

5S1 圓

5S1 Circles

認識圓心、半徑和直徑的性質，並能按指定條件準確畫圓。

Learn the properties of the centre, radius and diameter, and draw a circle accurately from given information.

學習重點

What to learn

- 認識圓心、半徑和直徑，理解它們在圓中的位置。
Identify the centre, radius and diameter of a circle.
- 知道同一個圓內所有半徑相等，所有直徑也相等。
All radii in the same circle are equal, and all diameters in the same circle are equal.
- 理解直徑通過圓心，並掌握直徑 = $2 \times$ 半徑。
A diameter passes through the centre, and diameter = $2 \times$ radius.
- 使用圓規按指定圓心和半徑畫圓。
Use a compass to draw a circle with a given centre and radius.

考試前必記

Remember before a test

- 半徑是連接圓心和圓周上一點的線段；直徑是通過圓心、兩端都在圓周上的線段。
A radius joins the centre to the circle. A diameter joins two points on the circle and must pass through the centre.
- 已知半徑 r ，直徑 $d = 2r$ ；已知直徑，半徑 = 直徑 $\div 2$ 。
If the radius is r , the diameter $d = 2r$. If the diameter is known, radius = diameter $\div 2$.
- 畫圓前先定圓心，再把圓規張開至指定半徑，針尖位置保持不動。
Mark the centre first, open the compass to the given radius, and keep the compass point still while drawing.
- 題目若給直徑，先除以 2 求半徑，再按半徑調校圓規的開口。
If a diameter is given, divide it by 2 before setting the compass opening to the radius.

常見錯誤

Common mistakes

- 把任何連接圓周兩點的線段都稱為直徑；只有經過圓心才是直徑。
Calling every line joining two points on a circle a diameter. It is a diameter only if it passes through the centre.
- 混淆半徑和直徑，忘記直徑的長度是半徑的 2 倍。
Confusing the radius with the diameter and forgetting that the diameter is twice the radius.
- 用直尺量圓規開口時從錯誤刻度開始。
Measuring the compass opening from the wrong mark on a ruler.
- 畫圓時移動針尖或改變圓規開口，令畫出的線不能形成所要求的圓。
Moving the compass point or changing its opening, so the required circle is not drawn.

快速自查

Quick check

☐ 能指出圓心、半徑和直徑 I can identify the centre, radius and diameter.	☐ 能運用 $d = 2r$ I can use $d = 2r$.
☐ 能判斷線段是否為直徑 I can decide whether a line is a diameter.	☐ 能按指定半徑畫圓 I can draw a circle with a given radius.