

Coordinates - Notes and Steps



Key idea

A point is written (x, y) . Go **across first** for x , then **up or down** for y .

Method

1. Start at the origin $(0, 0)$.
2. Move left/right — that is x .
3. Move up/down — that is y .
4. Write it as (x, y) .

Example

A point 4 right and 3 up is $(4, 3)$.
A point 5 left on the x -axis is $(-5, 0)$: on the axis, $y = 0$.

Common mistake

Do not swap the order.
 $(2, -5)$ means right 2, then down 5 — not down 2, then right 5.

The Four Quadrants



Key idea

The two axes split the plane into **four quadrants**. The signs of x and y tell you which one.

The signs

Quadrant I: $(+, +)$

Quadrant II: $(-, +)$

Quadrant III: $(-, -)$

Quadrant IV: $(+, -)$

Example

$(-2, -3)$: both x and y are negative, so it is in **Quadrant III**.

Common mistake

A point on an axis is **not** in any quadrant.

If $x = 0$ it sits on the y -axis; if $y = 0$, the x -axis.