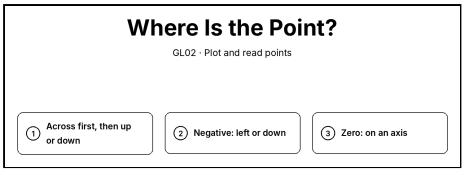
Where Is the Point?: teacher script

GL02-V1 · GL02 Plot and read points · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 58 seconds as a video.

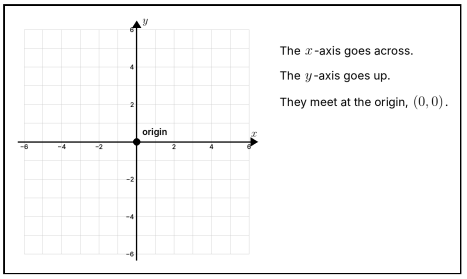
01



Say. Points on the plane. Across first, then up or down. A negative number goes left or down. And a zero puts the point on an axis.

Draw. Write the title “Where Is the Point?” and the steps: 1. Across first, then up or down; 2. Negative: left or down; 3. Zero: on an axis.

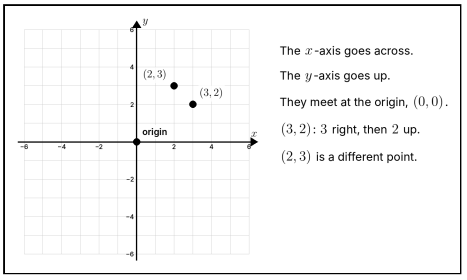
02



Say. Two number lines make the plane. The x axis goes across, and the y axis goes up. They meet at the origin.

Draw. Clear the board and draw a grid with axes from -6 to 6. Plot (0, 0) and label it “origin”. Beside the grid, write “The x-axis goes across.”. Beside the grid, write “The y-axis goes up.”. Beside the grid, write “They meet at the origin, (0, 0).”.

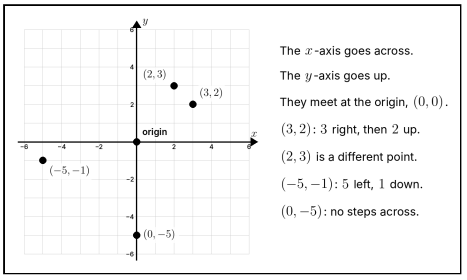
03



Say. The point 3, 2: go 3 to the right, then 2 up. The order matters: 2, 3 is a different point.

Draw. Plot (3, 2) and label it “(3, 2)”. Plot (2, 3) and label it “(2, 3)”. Beside the grid, write “(3, 2): 3 right, then 2 up.”. Beside the grid, write “(2, 3) is a different point.”.

04



Say. Negative 5, negative 1: 5 to the left, then 1 down. And 0, negative 5 takes no steps across at all: it is on the y axis, 5 down.

Draw. Plot (-5, -1) and label it “(−5, −1)”. Plot (0, -5) and label it “(0, −5)”. Beside the grid, write “(−5, −1): 5 left, 1 down.”. Beside the grid, write “(0, −5): no steps across.”.

05

Trap plot $(4, 3)$

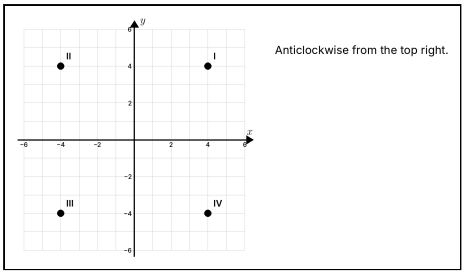
$\times$ 3 across, 4 up

$\checkmark$ 4 across, 3 up

Say. Watch for the trap: swapping the coordinates. For 4, 3, go across first: 4 across, then 3 up.

Draw. Clear the board. Write “Trap” and plot (4, 3). Below, write 3 across,\ 4 up and cross it out ×. Then write 4 across,\ 3 up with a tick ✓.

06



Say. The axes cut the plane into four quadrants, numbered anticlockwise from the top right: quadrant one, quadrant two, then three and four.

Draw. Clear the board and draw a grid with axes from -6 to 6. Plot (4, 4) and label it “I”. Plot (-4, 4) and label it “II”. Plot (-4, -4) and label it “III”. Plot (4, -4) and label it “IV”. Beside the grid, write “Anticlockwise from the top right.”.

07

Your turn

Across first, then up or down.
A zero puts the point on an axis.

Say. Now it is your turn. Across first, then up or down.

Draw. Point to today’s activity: Across first, then up or down. A zero puts the point on an axis.