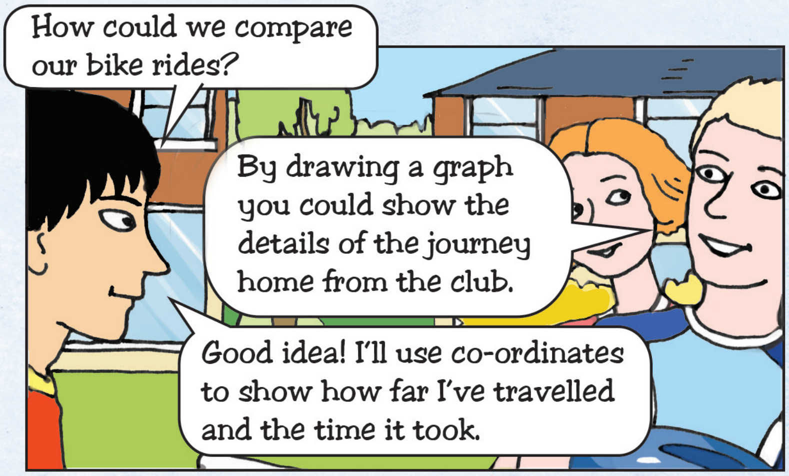
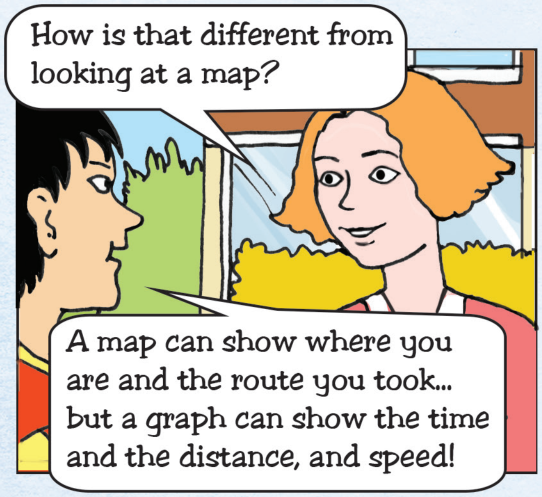
# Plot the point

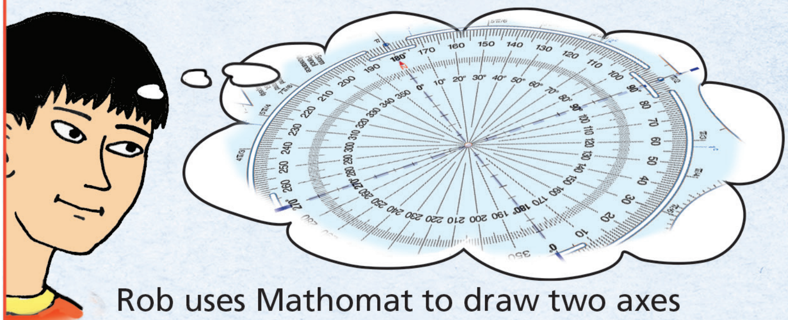
Use Mathomat to find your location on the Cartesian plane.

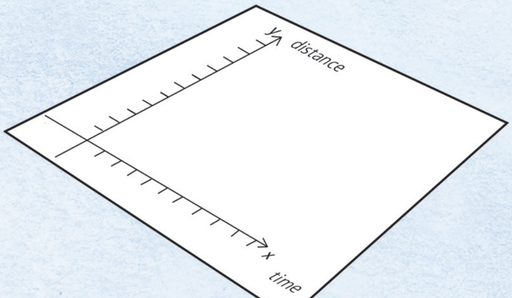



Mathomat's central crosshairs organise four sections. Time and distance graphs use the positive numbers.

The two axes form what mathematicians call **'The Cartesian plane'.**

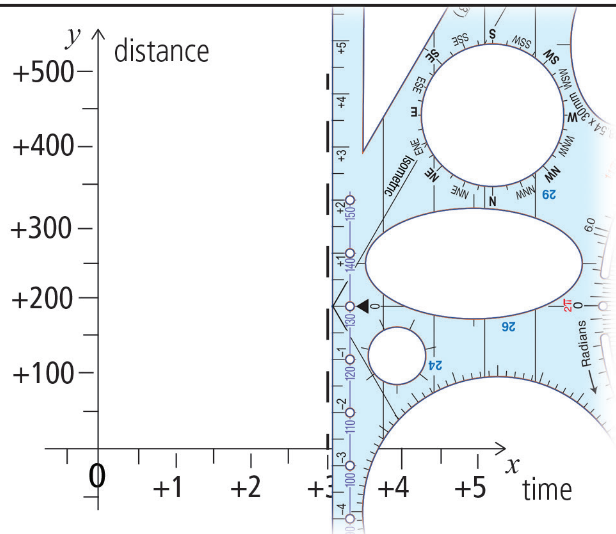




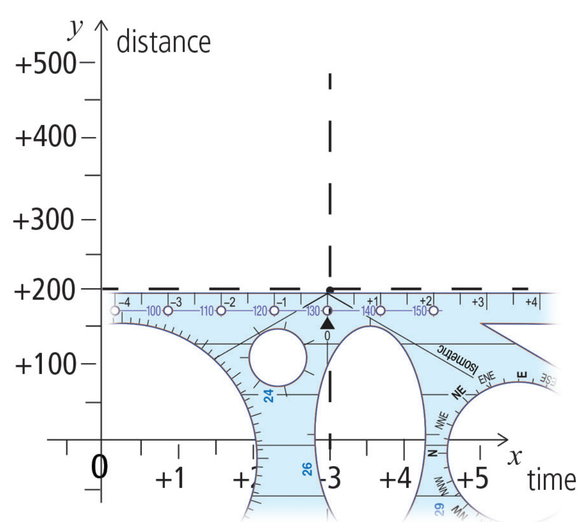

Rob uses Mathomat to draw two axes at right angles, one axis for time and one for distance.

Rob records his journey on this plane, starting at (0,0).

## Plotting points on the Cartesian plane




The time and distance co-ordinates of his next position are (3, 200). Rob mentally positions a vertical ruler at 3, then marks it with Mathomat.




Then he locates the 200 metre line. These imaginary lines cross at (3, 200). Rob marks the point on his graph with Mathomat.

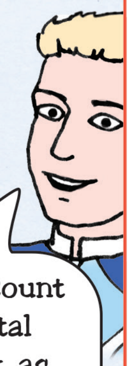
# Plot the co-ordinates to compare Rob's and Mark's journeys.

Here are all the co-ordinates for Rob's journey. The first number is **always** along the time axis.

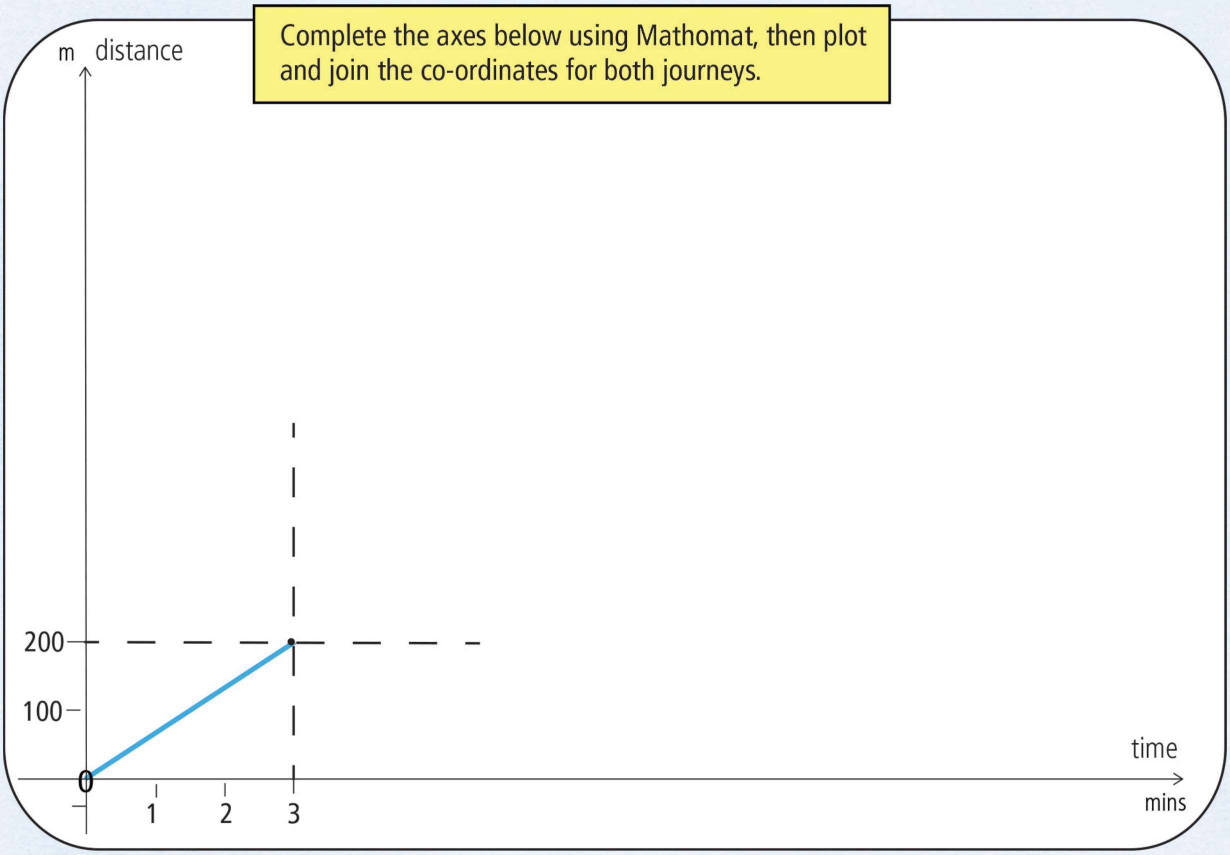
(0,0)
(3,200)
(5,400)
(6,400)
(11,600)
(12,700)
(15,1000)

Mark left the Club four minutes later than Rob. His graph starts at (4,0) if we measure from the same time as Rob. Mark's co-ordinates are:

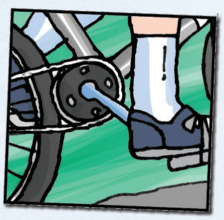
(4,0)
(7,200)
(8,400)
(9,400)
(13,600)
(14,900)
(16,1000)

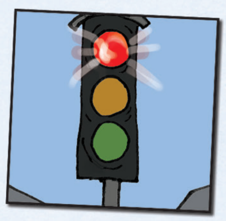



Complete the axes below using Mathomat, then plot and join the co-ordinates for both journeys.




The graph shows how Rob travelled 200m after 3 minutes.
Once you have plotted the two journeys, can you answer these questions?





| Who got home first? | Where is the hill? | Did Mark catch Rob up? | Where are traffic lights? | Who was the fastest? |
|---|---|---|---|---|
| ............................... | ..... m from the club. | yes/no . At ........... m. | ..... m from the club. | ............................... |