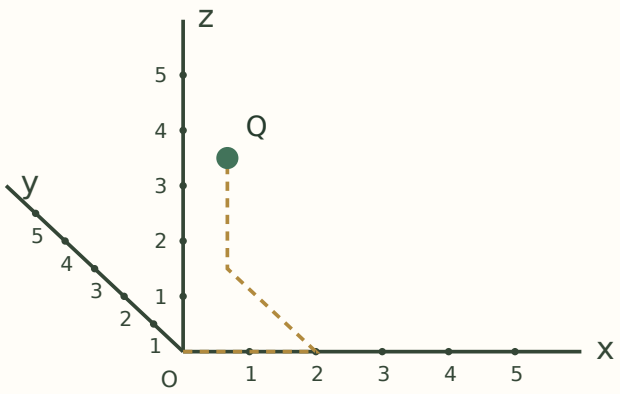
Interpreting 3D axes

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. State Q’s coordinates from the labelled diagram. [2 marks]



Dashed route follows x, then y, then z.
Sketch of 3D axes; each numbered step is 1 unit.

Read the x, then y, then z legs.

Answer: (2,3,2)

2. From (1,2,3), move parallel to x until x=4. State the new position. [2 marks]

Only the first entry changes.

Answer: (4,2,3)

3. Find the floor projection of (5,1,4). [2 marks]

Set z to zero, retaining x and y.

Answer: (5,1,0)

4. A point is on the y-axis with y=4. Write its coordinates. [2 marks]

On the y-axis, x and z are zero.

Answer: (0,4,0)

5. Can you read an exact point from an unlabelled 3D sketch with no scale? Explain. [2 marks]

A drawn length alone does not identify a coordinate value.

Answer: No. Axis identities and coordinate scales are missing.

6. A construction reaches (3,0,0), then (3,2,0), then (3,2,4). Name the direction of each leg. [2 marks]

Each leg changes one coordinate from the previous point.

Answer: Positive x, then positive y, then positive z.