Identifying positions using three coordinates

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Read the x-, y- and z-coordinates of (2,5,1). [2 marks]

Read entries from first to third.

Answer: x=2, y=5, z=1.

2. A drone is 4 units across, 2 units back and 3 units high. Write its position as (x,y,z). [2 marks]

Across is x, depth is y and height is z.

Answer: (4,2,3)

3. Which is on the floor z=0: A(1,0,2), B(3,4,0) or C(0,2,1)? [2 marks]

B has third coordinate zero.

Answer: B.

4. Describe (−2,1,3) using the positive axis directions as reference. [2 marks]

The minus sign belongs only to x.

Answer: 2 units in negative x, 1 in positive y and 3 in positive z.

5. Are (2,3,4) and (2,4,3) the same point? Explain. [2 marks]

The entries have a fixed order; swapping entries changes the location.

Answer: No. They have different y- and z-coordinates.

6. Which axis contains (0,0,5)? [2 marks]

Both horizontal entries are zero; only z varies.

Answer: The z-axis.