Comparing diagrams, views and digital representations

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Find the front view of $(1, 4, 2)$, where front shows x, z. [2 marks]

Retain the first and third coordinates.

Answer: $(1, 2)$

2. Find the side view of $(3, 2, 5)$, where side shows y, z. [2 marks]

Retain the second and third coordinates.

Answer: $(2, 5)$

3. Find the top view of $(4, 1, 3)$, where top shows x, y. [2 marks]

Retain the first and second coordinates.

Answer: $(4, 1)$

4. Front view on x, z is $(2, 4)$; top view on x, y is $(2, 3)$. Find the triple. [2 marks]

Front gives $x = 2$, $z = 4$; top gives $y = 3$.

Answer: $(2, 3, 4)$

5. Do $A(2, 1, 3)$ and $B(2, 5, 3)$ overlap in a front view on x, z? Explain. [2 marks]

The view hides y.

Answer: Yes; both show $(2, 3)$, though their y-coordinates differ.

6. A digital model is rotated on screen. Its coordinate axes rotate with it. Must a stored point’s coordinate triple change? Explain. [2 marks]

Distinguish the screen view from a change of coordinate system.

Answer: No. Rotating the view alone does not change coordinates relative to the same axes.