Coordinate transformations review

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Translate $(-2,3)$ four units right and two units down. [2 marks]

$-2+4=2$ and $3-2=1$.

Answer: $(2,1)$

2. Reflect $(3,-2)$ in the y-axis. [2 marks]

Change x to its opposite; leave y unchanged.

Answer: $(-3,-2)$

3. Reflect $(-1,4)$ in the x-axis. [2 marks]

Leave x unchanged; change the sign of y.

Answer: $(-1,-4)$

4. Rotate $(2,1)$ 90° anticlockwise about the origin. [2 marks]

Use $(x,y)\to(-y,x)$.

Answer: $(-1,2)$

5. $A(-3,1)$ moves to $A'(1,-2)$. State the translation. [2 marks]

$1-(-3)=4$; $-2-1=-3$.

Answer: 4 units right and 3 units down.

6. $B(0,-3)$ is reflected in the y-axis. Explain why it does not move. [2 marks]

Reflection changes x to $-x$; $-0=0$.

Answer: Its image is $(0,-3)$, because it lies on the mirror line.