

**13** A statement about the principle of moments with some words omitted is shown.

‘For an object in a state of rotational equilibrium, the sum of the clockwise moments about any point is equal to the sum of the anticlockwise moments about .....’

Which words correctly complete the statement?

- A** any point
- B** the centre of gravity of the object
- C** the pivot
- D** the same point

**14** A horizontal beam of length 4.50 m has a force of 100 N acting downwards at a point 1.01 m from the left end. The beam is supported by a pivot at the right end. Calculate the magnitude of the force acting upwards at the pivot. Give your answer to 3 significant figures.