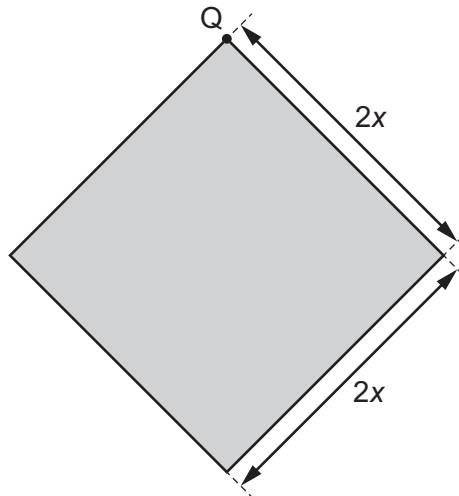
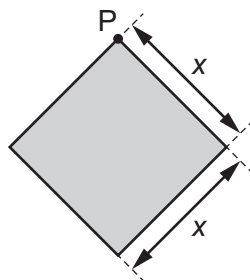


**11** A square board, of side length  $x$ , hangs freely from a nail P, as shown.

The board has uniform thickness and is made from material of uniform density.



A second square board, of side length  $2x$ , is made of the same material and has the same thickness as the original board. This second board is then hung from a nail Q. Nails P and Q are at the same height.

What is the vertical distance between the positions of the centres of gravity of the two boards?

**A** 0

**B**  $\frac{x}{\sqrt{2}}$

**C**  $x$

**D**  $x\sqrt{2}$