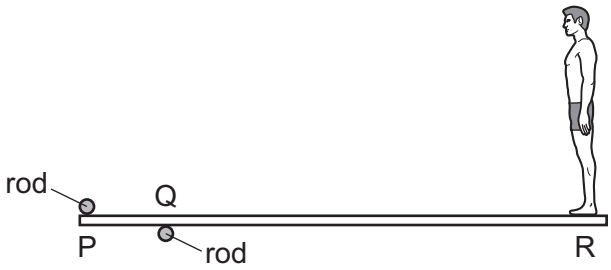
13 A uniform diving-board is held by two fixed rods at points P and Q. A person stands at end R of the diving-board, as shown.

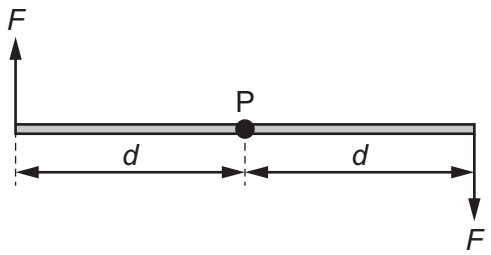


The forces exerted by the rods on the board are vertical. The board remains in equilibrium as the person slowly moves towards point Q from end R.

Which row describes the changes to the forces exerted by the rods on the board?

	force at P	force at Q
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

14 Two forces, each of magnitude *F*, act in opposite directions on a rod.



Each force acts on the rod at a distance *d* from the pivot P.

What is the torque of this couple about P?

A 0 **B** $F \times d$ **C** $2F \times d$ **D** $2F \times 2d$