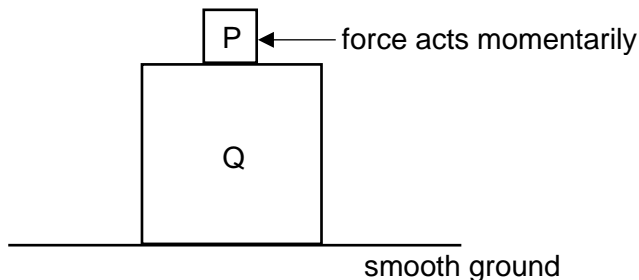


- 5 Block P is resting on a more massive block Q, which is resting on a smooth ground. The surfaces of blocks P and Q that are in contact with each other are rough.

A sudden force acts momentarily on block P to start it sliding to the left.



Which statement about the subsequent motions of the blocks is correct?

- A Block P accelerates as it moves to the left, while block Q remains at rest.
- B Block P and block Q accelerate as they move to the left, where the acceleration of block Q is smaller in magnitude compared to the acceleration of block P.
- C Block P decelerates and block Q accelerates as they move to the left, where the acceleration of block Q is smaller in magnitude compared to the deceleration of block P.
- D Block P decelerates and block Q accelerates as they move to the left, where the magnitudes of the acceleration of block Q and the deceleration of block P are the same.