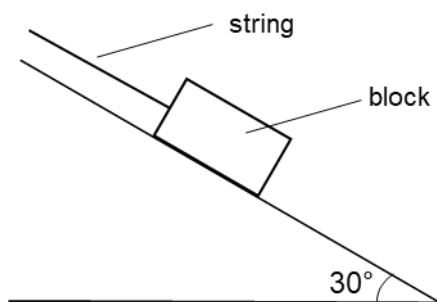5 A 5.0 kg block is placed on a rough slope inclined at an angle of 30° to the horizontal with a string attached to it as shown below.

The tension in the string is 2.0 N and the frictional force exerted by the slope is 3.0 N.

What is the magnitude of the acceleration of the block?

A 3.9 m s^{-2} B 5.1 m s^{-2} C 5.9 m s^{-2} D 7.5 m s^{-2}