6   A thruster is used to launch a 500 kg rocket vertically upward from rest. This thruster ejects exhaust at a speed of 1000 m s^{-1}.

What should be the minimum rate, in kg s^{-1}, at which the exhaust leaves the thruster at the instant of launch?

A   0.5   **B**   2.0   **C**   4.9   **D**   20