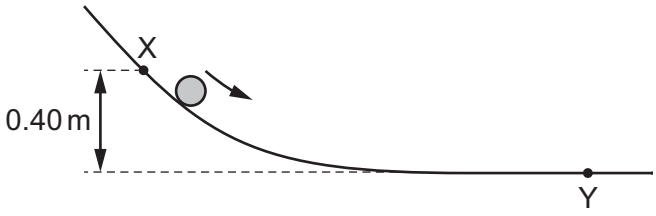
18 A ball slides down a curved track, as shown.



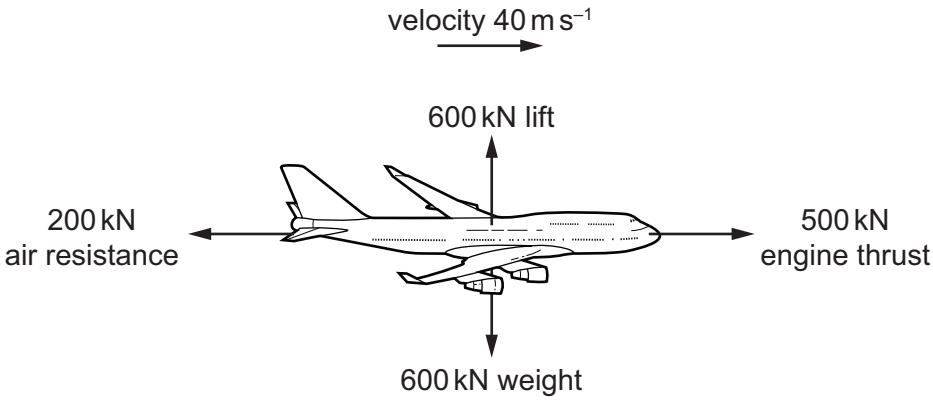
Point X is at a height of 0.40 m above point Y. The speed of the ball at point X is 2.5 m s^{-1}.

Frictional forces are negligible.

What is the speed of the ball at point Y?

A 2.8 m s^{-1} **B** 3.2 m s^{-1} **C** 3.8 m s^{-1} **D** 14 m s^{-1}

19 The force diagram shows an aircraft accelerating. At the instant shown, the velocity of the aircraft is 40 m s^{-1}.



At which rate is its kinetic energy increasing?

A 2.4 MW **B** 8.0 MW **C** 12 MW **D** 20 MW