

**19** A train on a mountain railway is carrying 200 people of average mass 70 kg up a slope at an angle of  $30^\circ$  to the horizontal and at a speed of  $6.0\text{ m s}^{-1}$ . The train itself has a mass of 80 000 kg. The percentage of the power from the engine which is used to raise the passengers and the train is 40%.

What is the power of the engine?

**A** 1.1 MW

**B** 2.8 MW

**C** 6.9 MW

**D** 14 MW