

- 7 A car of mass  $m$  has an instantaneous forward acceleration  $a$  when it is moving with velocity  $v$  up a frictionless track inclined at an angle  $\theta$  to the horizontal.

What is the engine power required at that instant?

- A  $mav$
- B  $mgv \sin \theta$
- C  $(ma + mg \sin \theta)v$
- D  $(ma - mg \sin \theta)v$