

- 9 At a particular time, the driving force applied by the driving wheels of a car is 1.6 kN . This force does useful work on the car to keep it moving at a constant speed of 22 m s^{-1} on level ground. The total thermal energy produced by the burning of fuel in the engine is 3.3 MJ per minute.

What is the efficiency of the car in converting the thermal energy into useful work done on the car to keep it moving at the constant speed of 22 m s^{-1} on level ground?

A 22%

B 36%

C 39%

D 64%

- 10 The orbit of the Moon around the Earth is circular with a radius of $3.85 \times 10^8\text{ m}$. The time for one