8 A car of mass 1400 kg is travelling on a straight, horizontal road at a constant speed of 25 m s⁻¹. The output power from the car's engine is 30 kW. The car then travels up a slope at 2.0° to the horizontal, maintaining the same constant speed.

What is the output power of the car's engine when travelling up the slope?

A 12 kW
B 31 kW
C 42 kW
D 65 kW