Answer on Question #43400, Physics, Mechanics — Kinematics — Dynamics

To travel up a uniform incline at a constant speed of 198 km/h, the wheels of a 1.35 * 10 to the power of 3 kg car generates a driving force of 590 N. What is the power output at the wheels of the car?

Solution

Power can be found as

$$P = Fv$$

where $F = 560$ N is driving force and $v = 198$ km/h $= 55$ m/s. Hence

$$P = 590 \cdot 55 = 32450W$$