

A car of mass m kg is towing a trailer of mass 300 kg down a straight hill inclined at 3° to the horizontal at a constant speed. There are resistance forces on the car and on the trailer, and the total work done against the resistance forces in a distance of 50 m is 40 000 J. The engine of the car is doing no work and the tow-bar is light and rigid.

- (a) Find the value of m . [3]

[illegible]

The resistance force on the trailer is 200 N.

- (b)** Find the tension in the tow-bar between the car and the trailer. [2]

[illegible]