

2 A car of mass 1400 kg pulls a trailer of mass 400 kg along a straight horizontal road. The engine of the car produces a driving force of 6000 N . A resistance of 800 N acts on the car. A resistance of 300 N acts on the trailer. The tow-bar between the car and the trailer is light and horizontal.

(a) Draw a force diagram showing all the horizontal forces on the car and the trailer. **[2]**

(b) Calculate the acceleration of the car and trailer. **[3]**