

3. A girl pushes a merry-go-round with a force of 120 N for a distance of 6.0 m. If she does this in 2.0 s, how much power does she have? (2 marks)

4. A 2000kg car runs out of gas at the top of a hill, and the driver decides to let it coast down the hill and as far as he can on the flat road at the bottom to shorten the distance to the gas station. The car is travelling at 50km/hr, the hill is 200m long and inclined at 15° to the horizontal. The car eventually comes to a stop 800m from the base of the hill. (8 marks)



- a. Briefly explain why the car came to a stop on the flat road.

- b. How much energy did the car have at the start of the problem?

- c. Explain how you would solve this problem using an Energy Approach (NOT kinematics). This is not a calculation question – point form is fine for your explanation, but proper terminology is important.