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Chapter 2:

Constant

Acceleration

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5. A car travelling along a straight horizontal road takes 170s to travel between two sets of traffic lights at A and B which are 2125m apart. The car starts from rest at A and moves with constant acceleration until it reaches a speed of 17ms^{-1} . The car then maintains this speed before moving with constant deceleration, coming to rest at B . The magnitude of the deceleration is twice the magnitude of the acceleration.

(a) Sketch, in the space below, a speed-time graph for the motion of the car between A and B .

(3)

(b) Find the deceleration of the car.

(7)
