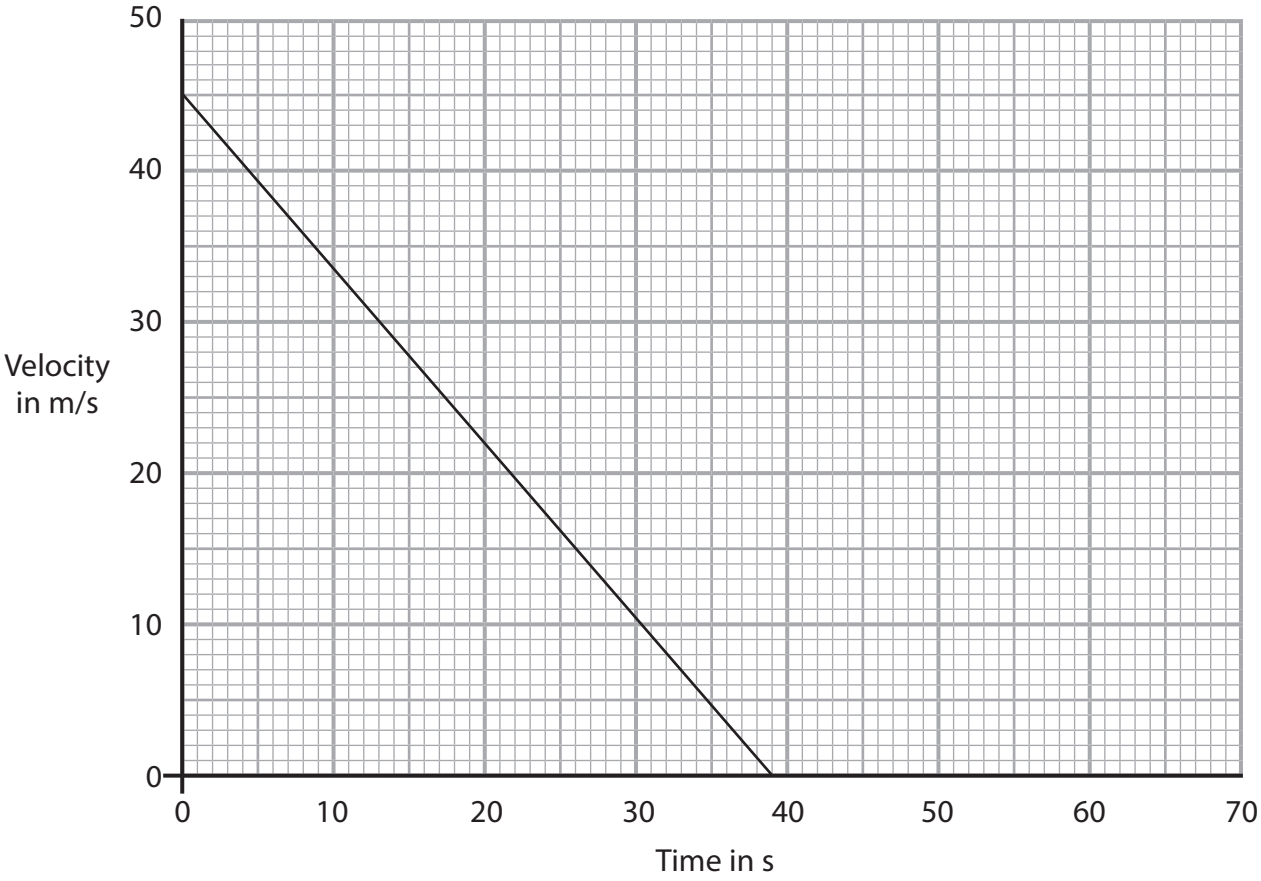
2 This question is about the movement of a train.

The diagram shows the train on a track.

The train starts braking at point P and stops moving at point Q.

The graph shows how the train's velocity changes with time as the train travels from P to Q.



(a) Calculate the acceleration of the train.

(3)

acceleration = ... m/s^2

(b) Calculate the distance travelled by the train from P to Q.

(3)

distance = ... m

(c) Draw a line on the graph to show how the train's velocity will change if its initial velocity is the same but the braking force is lower.

(2)

(Total for Question 2 = 8 marks)