Speed and Acceleration Revision Questions

1. What are the units for speed?
2. Calculate the average speed of a car which takes 3 minutes to travel 1000m.
3. Calculate the time taken for a car travelling at 20ms-1 to travel 500m.
4. Calculate how far a bus would travel if it was travelling at a speed of 58mph for 3600 seconds.
5. Explain the difference between average and instantaneous speed.
6. Explain how we can use carts and light gates to measure instantaneous speed.
7. Describe how to measure average speed.
8. The speed of a glider which was cruising at a steady speed before going into a dive is shown in the graph.

40

30

20

10

speed (m/s)

Time (s)

5

10

15

20

25

30

(a) What was the speed of the glider before the dive? (1)

(1)

(b) What was the speed of the glider after diving for 15 seconds?

(1)

1. Explain how we can measure acceleration with

 a) two light gates and one mask on a cart

b) one light gate and a double mask on the cart

1. What are the units for acceleration?
2. Calculate the acceleration of a vehicle travelling from rest to 12 ms-1 in 5 s.
3. A car accelerates at 4 ms-2 for 10 s from rest. Calculate the sped of the car after 10s.
4. Calculate the deceleration of a train which travels from 30 ms-1 to 16 ms-1 in a time of 1 minute.