

Acceleration Homework

1. Write down the formula for acceleration and what each term means.
2. A car speeds up from 10 ms^{-1} to 20 ms^{-1} in a time of 5.0 s , calculate the car's acceleration.
3. i) A 15.0 cm card attached to a vehicle travels down a slope through a light gate in a time of 0.2 s . Calculate the speed of the vehicle at this point.
ii) The card continues down the slope and passes through a second light gate in a time of 0.15 s . Calculate the speed of the vehicle at this point.
iii) The time take for the vehicle to travel from the first light gate to the second was 0.8s . Using your answers to i) and ii), calculate the acceleration of the vehicle down the slope.
4. If a car has an acceleration of 4 ms^{-2} , what does it gain each second?
5. A car has an acceleration of 3.0 ms^{-2} . If the car starts from rest. Copy out and fill in the table.

Time (s)	Speed (ms^{-1})
0	0
1	
2	
3	
4	
5	