




Assess your learning – Uniform Acceleration Rate your understanding of this chapter (<i>be honest!</i>)	 No	 Kinda	 Yes	Revised for Week 10 Exam	Revised for Week 30 Exam
I can use the 4 equations of motion to solve problems, when given 3 of the 4 variables. E.g. A car slows down from 80 m/s to 60 m/s over a seven second time interval. (i) Find the deceleration and the distance travelled. (ii) If the car continues to slow down at the same rate, how much further will it travel before coming to rest?					
I can solve problems using time-velocity graphs. E.g. A car accelerates at 2 m/s ² from rest to a speed of 60 m/s. It then travels at a steady speed for 40 s. It then decelerates to rest, covering a distance of 200 m while decelerating. (i) Draw a velocity-time graph to show the car's motion. (ii) Use your graph to find the average speed for the journey.					
I can solve problems involving particles passing successive points. E.g. A motorbike moving with constant acceleration passes three telegraph poles A, B and C on a straight road. The distance from A to B is 50 m and from B to C is 120 m. The car takes 5 seconds to go from A to B and 8 s to go from B to C. Find the acceleration of the bike.					
I can solve problems involving particles overtaking each other. E.g. At a certain moment in a triathlon race, Peter is 30 m behind Kevin. Peter is cycling at 10 m/s and accelerating at 1 m/s ² . Kevin starts from rest and accelerates with acceleration 3 m/s ² . After how long will Peter catch up with Kevin.					
I can solve problems involving particles falling freely under gravity. E.g. A pebble is thrown vertically upwards under gravity with a speed of 3 m/s from the edge of a diving board that is 10 m above the ground. Find the speed the pebble hits the ground.					
I can solve problems when variables are given, instead of actual values. E.g. A car has to travel a distance s on a straight road. The car has maximum acceleration a and maximum deceleration b . It starts and ends at rest. Show that is there is a speed limit of v m/s, the time taken to complete the journey is $\frac{v}{2a} + \frac{v}{2b} + \frac{s}{v}$					