

Sample question: A car is travelling at a constant velocity of  $30 \text{ m s}^{-1}$ . At a time  $t = 0 \text{ s}$  a police car starts to chase the car from rest. If the acceleration of the police car has a constant value of  $3.0 \text{ m s}^{-2}$ , calculate the time taken by the police car to reach the other car. What is the distance travelled by the car in that time?

Answer:  $t = 20\text{s}$ , distance =  $600\text{m}$