



KEC

# K Education Centre



## GCSE Physics

Braking distance and work done

Assignment Questions

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**Q1 : Calculate the resultant force and work done if an object of mass 75 kg is accelerating from rest to velocity of 40 m/s over distance of 50 metres in 30 seconds.**

**Q2 : Calculate the stopping distance of a car of mass 800 kg :**

**if the car covered distance of 10 metres after driver reacting to stimuli and then applied the brakes . After application of brakes cars decelerate from 30 m/s to rest in 10 seconds.**

**Q3 : A 1800 kg car is travelling at velocity of 40 m/s. The driver applies the brakes with the braking force of 5000 N. How far does the car travel before it comes to stop ?**

**Q4 : List the factors that affect the stopping distance of a car.**

**Q5 : Explain the relationship between velocity and the braking distance of a vehicle.**

**Q6 : A car of mass 1200 kg is travelling at 50 m/s . If the reaction time of a driver is 0.8 seconds Calculate the thinking distance. The driver applies the brakes with braking force of 8000 N. How far car travel before it comes to stop? Calculate the stopping distance of the car.**

**Q7 : A scooter moving at a speed of 20 m/s is stopped by applying the brakes which produces the deceleration of , - 0.5 m/s<sup>2</sup>. How much distance will it cover before coming to stop?**