**SC20F Reaction Time & Braking Distance Name:**

1. Define the terms:
   1. Reaction time
   2. Reaction Distance
2. Explain the difference between **Braking Distance** and **Stopping Distance.**
3. Give three factors that can affect your stopping distance while driving.
4. Give three factors that can affect your reaction time.
5. You are driving on a snowy road (k=0.6) at 100 km/hr. A moose jumps out on the road and you slam on your brakes to stop. You have a reaction time of 1 second. Determine the:
   1. Distance you travel while you react to the moose
   2. Distance the car travels while braking.
   3. Total stopping distance.
6. Determine what the total stopping distance would have been in question #4 if you were driving at 50km/hr instead.
7. A car is driving at 60km/hr on dry pavement (k=0.15) when a dog runs out in front of the car. The driver has a reaction time of 1.5s. Determine the total stopping distance for the car.
8. If the dog in #7 jumped out 35m in front of the car, will the car stop in time?
9. If you are driving on dry pavement (k=0.15) on the highway at 100km/hr following another car when it slams on its brakes. How far will you go before you stop if you can react in 0.8s.
10. If your car is about 3.5m long, about how many car lengths should you leave to ensure you don’t crash into the car in front of you?