

**Interpreting and analyzing stopping, reaction and braking distances at various speeds**

Watch the following interactive simulation: <https://rasekh.qa/en/resource/braking-distance/>

Simulation in Arabic: <https://rasekh.qa/ar/resource/braking-distance/>

From the simulation you just watched, construct a bar graph showing the **stopping distance** corresponding to each of the given speeds in dry and wet conditions (x-axis - speed in km/h, y-axis - the distance in metres).

Then answer the following questions using the simulation:

- Q1) What is the **reaction distance** when the car travels at 30 km/h on a dry road?
- Q2) Does the **reaction distance** change when the car travels at 30 km/h on a wet road?
- Q3) What is the difference between the **stopping distance** at 80 km/h and 50 km/h on a dry road?
- Q4) What is the difference between the **stopping distance** at 80 km/h and 50 km/h on a wet road?
- Q5) What is the difference in metres for the driver to **stop** when driving at 50 km/h to avoid any obstacles on the road, on a dry road compared to a wet road?
- Q6) How many seconds does the driver use to completely **stop** the car when traveling at a speed of 80 km/h on a dry road and what is the **stopping distance**?
- Q7) What do you notice about the seconds the driver uses to **stop** the car and the **stopping distance** when traveling at a speed of 80 km/h on a wet road? Explain your answer.

---



---



---

- Q9) What is the **braking distance** for a driver traveling at 100 km/h on a dry road?
- Q10) Repeat question 9 on a wet road, what is the difference in the **braking distance** between them? What is your perception on this? Explain your answer.

---



---



---

- Q11) What does a driver need to be mindful of when traveling at various speeds on a wet road compared to a dry road? Explain your answer.

---



---



---