

Stopping Distance



WORD EQUATION

_____ = _____ + _____

Factors that increase THINKING distance

Factors — sort them into the two lists

tiredness alcohol drugs

using a phone speed wet road

icy road worn tyres worn brakes

heavy load

Careful — one of them belongs in **both** lists.

Factors that increase BRAKING distance

Exam-Style Question — a car brakes to a stop [5 marks]

(a) Which part of the graph represents the “reaction time” or “thinking time” of the driver? (1)

(b) (i) What is the thinking time of the driver? (1)

Time = _____ seconds

(b) (ii) Calculate the thinking distance of the car. (1)

(c) Calculate the braking distance of the car. (2)

Extended Response — write in full sentences [6 marks]

A driver is travelling at **30 m/s** along a motorway. It begins to rain heavily, and the driver is also **very tired** after a long journey.

Explain how these two factors affect the driver’s stopping distance. In your answer you should refer to **both** thinking distance and braking distance.
