

Stopping Distance, Thinking Distance, Braking Distance and Speed.



1. What is the link between Stopping Distance, Thinking Distance, and Braking Distance?
2. What affects the thinking distance?
3. List things that affect braking distance.
4. A person in a car travelling at 20 mph. has a thinking distance of 6m and a braking distance of 6m what is her stopping distance?
5. Copy and complete the table filling in the missing values from the white columns.

Speed	Speed	Thinking Distance	Braking Distance	Stopping Distance	Stopping Distance	Reaction Time
(mph)	(m/s)	(m)	(m)	(m)	(car lengths)	(s)
20	9.0	6	6			
30	13.5		14	23		
40	18.0	12		36	9	
50	22.5	15	38			
60	27.0		55	73		
70	31.5	21		96		

6. At 40m.p.h the stopping distance of a car is 36 m or 9 car lengths. From this information work out the average length of one car.
7. In the table fill in the column with the stopping distance recorded in number of car lengths (round this value to the nearest car length).
8. What is the formula that links speed distance and time?
9. Rearrange this equation to find time?
10. Use the equation in question 8 to find out the THINKING TIME (reaction time) used in the table. Calculate the answer for each speed.
11. Try to plot a graph, either with excel or on graph paper to show the data in the table. Think what the best graph would be.
12. Advanced Question: What is the conversion figure between speed in mph and speed in m/s?

Stopping Distance, Thinking Distance, Braking Distance and Speed.



1. What is the link between Stopping Distance, Thinking Distance, and Braking Distance?
2. What affects the thinking distance?
3. List things that affect braking distance.
4. A person in a car travelling at 20 mph. has a thinking distance of 6m and a braking distance of 6m what is her stopping distance?
5. Copy and complete the table filling in the missing values from the white columns.

Speed	Speed	Thinking Distance	Braking Distance	Stopping Distance	Stopping Distance	Reaction Time
(mph)	(m/s)	(m)	(m)	(m)	(car lengths)	(s)
20	9.0	6	6			
30	13.5		14	23		
40	18.0	12		36	9	
50	22.5	15	38			
60	27.0		55	73		
70	31.5	21		96		

6. At 40m.p.h the stopping distance of a car is 36 m or 9 car lengths. From this information work out the average length of one car.
7. In the table fill in the column with the stopping distance recorded in number of car lengths (round this value to the nearest car length).
8. What is the formula that links speed distance and time?
9. Rearrange this equation to find time?
10. Use the equation in question 8 to find out the THINKING TIME (reaction time) used in the table. Calculate the answer for each speed.
11. Try to plot a graph, either with excel or on graph paper to show the data in the table. Think what the best graph would be.
12. Advanced Question: What is the conversion figure between speed in mph and speed in m/s?