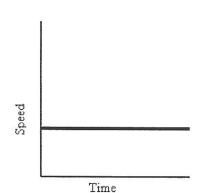
## **Speed-Time Graphs**

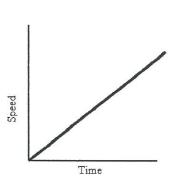
Speed-Time Graphs look much like Distance-Time graph! Be sure to read the labels.



Time is plotted on the X-axis.

Speed or velocity is plotted on the Y-axis

A straight horizontal line on a speed-time graph means the speed is constant. This means the speed is not changing over time. How is this different from a distance-time graph?

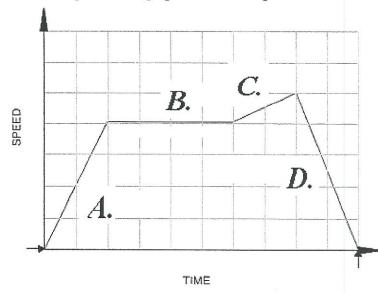


Time

A positive slope represents an increasing speed. The moving object is accelerating.

A negative slope represents a decreasing speed The moving object is decelerating.

Match the part of the graph to the description:



Steady acceleration:

Steady speed:

Gradual acceleration:

Steady deceleration:

## **Summary:**

- The steeper the line, the greater the acceleration
- A horizontal line means the object is moving at a constant speed
- A downward (negative) sloping line means the object is slowing down (decelerating)

## Acceleration

If the statement is true, write true. If	it false, change	the underlined word	or words to make the
statement true.	<ol> <li>If a train is slowing down, it <u>is</u> accelerating.</li> <li>To find the acceleration, you must calculate the change in <u>distance</u> during each unit of time.</li> <li>A Ferris wheel is turning at a constant speed of 5 m/s <u>is not</u> accelerating.</li> <li>An airplane is flying west at 200 km/h. 2 hours later, it is flying west at 300 km/h. Its average acceleration is <u>100</u> km/h².</li> </ol>		
1.0. (20.1.20.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			
	5. Graph A plo		for 5 seconds. The car's
		_	ed for a different 5 second ng this interval is 12 m/s <sup>2</sup> .
Graph A		Graph	В
24 21 8 E 15 9 12 9 6 3 0 1 2 3 Time (s)	4	24 21 18 E) 15 19 12 6 3 0 0 1 2 Time (s)	3 4
Match each of the following: A. the car is traveling at a constant 1.	speed B. The 2.	car is accelerating 3.	C. the car is decelerating
	eed	speed	
, and		lime 1	time
Graph 1 matches description	_ because		
Graph 2 matches description	because		
Graph 3 matches description	because		