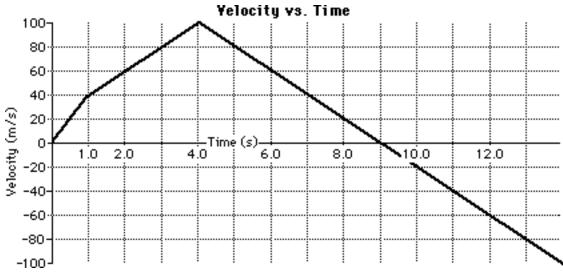
Interpreting Velocity-Time Graphs

The motion of a two-stage rocket is portrayed by the following velocity-time graph.



Several students analyze the graph and make the following statements. Indicate whether the statements are correct or incorrect. Justify your answers by referring to specific features about the graph.

Correct?

St	udent Statement	Yes or No
1.	After 4 seconds, the rocket is moving in the negative direction (i.e., down).	
	Justification:	
2.	The rocket is traveling with a greater speed during the time interval from 0 to 1 second than the time interval from 1 to 4 seconds.	
	Justification:	
3.	The rocket changes its direction after the fourth second. Justification:	
4.	During the time interval from 4 to 9 seconds, the rocket is moving in the positive direction (up) and slowing down.	
	Justification:	-
5.	At nine seconds, the rocket has returned to its initial starting position.	
	Justification:	