Section 8.1
The Language of Motion
Study Notes

By the end of section 8.1 you should be able to understand the following:

- ❒ A vector quantity has both a magnitude and a direction. A scalar quantity has magnitude only.
- ❒ Position and displacement are vector quantities. Distance and time are scalar quantities.
- ❒ The magnitude of an object's displacement will be the same as the distance an object travels only if it travels in a straight line in one direction.
- ❒ An object in uniform motion travels equal displacements in equal time intervals; uniform motion is represented as a straight line on a position-time graph.

NOTES

What is the difference between a scalar quantity and a vector quantity? Give an example of each.	1. 2.
What is the difference between distance and position? Give an example of each to help explain the difference.	1. 2.
What is the difference between time and a time interval?	1. 2.

Do the Reading Check on page 347

NOTES

How is a time interval determined? What is the formula for determining time intervals?	1. 2.
What is the difference between distance and displacement? What is the formula for determining displacement?	1. 2.
What is uniform motion? Sketch a graph of an object with uniform motion on a position-time graph.	1. 2.
	Do the Reading Check on page 351
Sketch three position-time graphs: one with a positive slope, one with a zero slope, and one with a negative slope.	1. Positive slope 2. Zero slope 3. Negative slope