

Chapter 12

Graphs of Motion

Activity

When school was over, Mounika and Divya left for their homes. Mounika's house lay to the east of the school while Divya's house lay to the west. The graph of their journey to their homes is shown in graph - 8. Look at the graph and answer the following questions.

- Did Mounika walk with uniform motion throughout her journey?
- How far is Mounika's home from the school?
- How far is Divya's home from the school?
- How much time did Mounika take to reach her home?
- How much time did Divya take to reach her home?
- Did Divya stop on the way? For how much time did she stop?
- Calculate Divya's average speed during her journey?
- Did Mounika halt anywhere? How much time did she stop?
- Calculate Mounika's average speed during her journey?

The graph of a story

This is a very old story. You may have heard it many times before. It is the story of a race between the rabbit and the tortoise. The two take a bet on who will win the race. The rabbit takes off swiftly while the tortoise begins at a slow and steady pace. The rabbit runs far ahead, and then halts to rest under a tree for a while. He falls asleep.

The tortoise, meanwhile, continues to forge ahead steadily. When the rabbit awakes, he runs swiftly to the finishing post.

But alas! When he reaches, the finishing line he finds that the tortoise has already won the race.

- Illustrate the race between the rabbit and the tortoise in the form of a graph.