

Team Race

Name: _____

You have decided to run in a long distance race. There are two teams that you can join. Team A runs at a constant rate of 2.5 miles per hour. Team B runs 4 miles the first hour and then 2 miles per hour after that.

Task: Create a table for each team showing the distances that would be run for times of 1, 2, 3, 4, 5 and 6 hours.

Team A	
Time (hrs)	Distance (miles)

Team B	
Time (hrs)	Distance (miles)

1. For which team is distance proportional to time? Explain your reasoning.
2. Explain how you know the distance for the other team is not proportional to time.
3. If the race were 2.5 miles long, which team would win? Explain.
4. If the race were 3.5 miles long, which team would win? Explain.

5. If the race were 4.5 miles long, which team would win? Explain.

6. For what length of race would it be better to be on Team B than Team A? Explain.

7. Using this relationship, if the members on the team ran for 10 hours, how far would each member run on each team?

8. Will there always be a winning team, no matter what the length of the course? Why or Why not?

9. If the race were 12 miles long, which team should you choose to be on if you wish to win? Why would you choose this team?

10. How much sooner would you finish on that team compared to the other team?