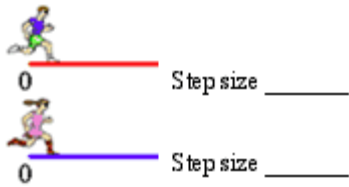



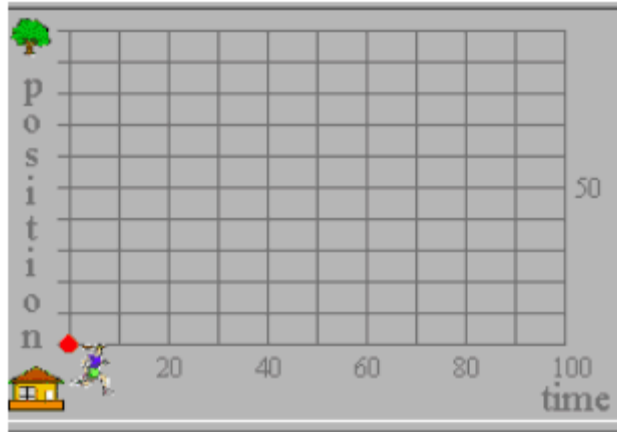
# Runners, Take Your Mark! (Two Runners)

NAME \_\_\_\_\_

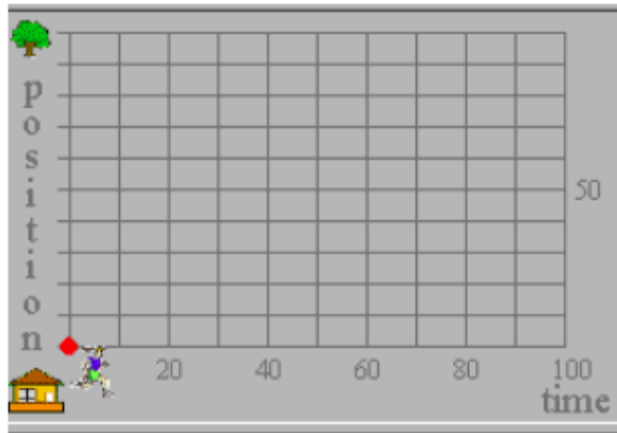
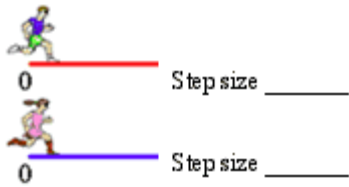
- Set your runner at the zero position and ready to run in the forward direction from left to right. Choose the same step size (1) for each runner and record below.



Click on the **slow run button**  and record where your runner is after each step on the graph. Click ten or more times (until you see the slope of the line). Use a blue pen/pencil to record the girl's slope and red pen/pencil to record the boy's slope. Indicate the step size above each slope.



- Set both of the runners at the zero position and ready to run in the forward direction from left to right. Choose different step sizes for each runner and record below.



- Before running the race, predict who will run the race.
- Think about what the slope on the graph may look like. On the graph above, sketch what you think the blue and red lines will look like before clicking the slow run button.

5. Who won the race?
6. Was that the runner you expected?
7. If you correctly predicted the winner, defend your reasoning. If you incorrectly predicted the winner, explain why you think the other runner won.
8. Change the step sizes. Predict the winner before starting the race. Then check your prediction.
9. Now put one runner ahead of the other runner at the beginning of the race. Predict the winner and check your prediction. Try different step sizes. Can you also predict when the graphs of the runners will cross?