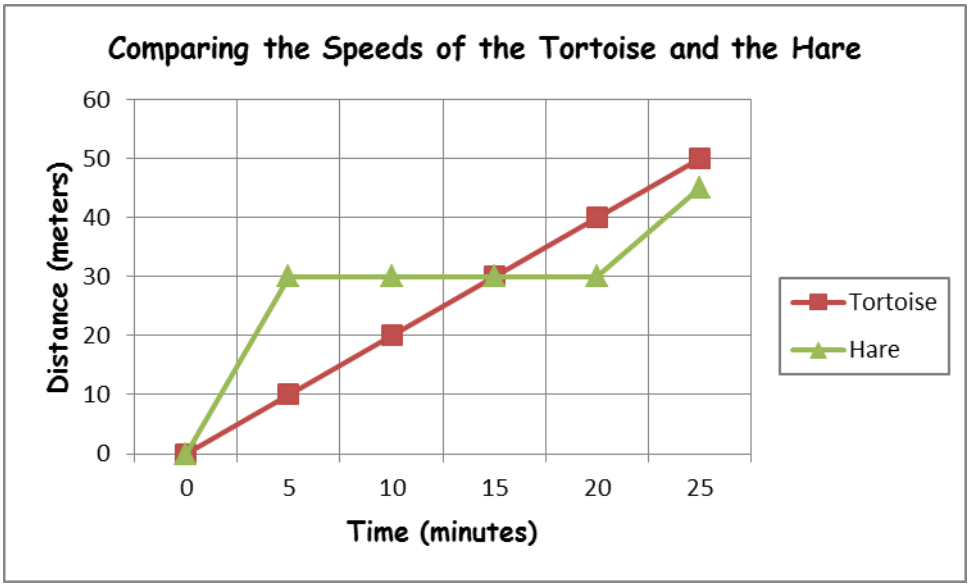
Name: _____ Section: _____

Understanding Distance-Time Graphs

Directions: Use your knowledge of distance-time graphs to answer the questions that follow.

Part 1



1. What can be calculated using the distance-time graph above? Explain your reasoning.

2. What does the Tortoise's line tell you about its speed?

3. What does the Hare's line tell you about its speed?

4. Describe the Hare's speed during the period of time between five and twenty minutes?

5. Use the speed formula to compare and contrast the speeds for both the Tortoise and the Hare in the <u>first five minutes</u>. **Show your work!**

6. Use the speed formula to compare and contrast the speeds for both the Tortoise and the Hare in the <u>final five minutes</u>. **Show your work!**

7. Use the speed formula to compare and contrast the speeds for both the Tortoise and the Hare for the <u>25 minute period of time</u>. **Show your work!**

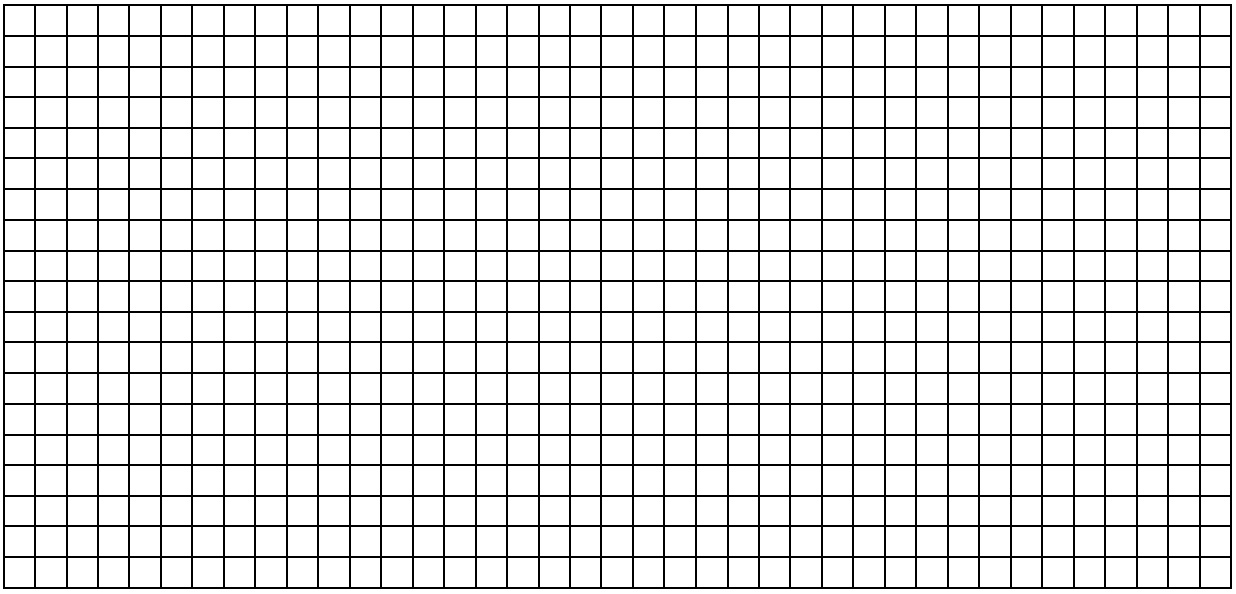
8. For the previous three (5-7) questions it was necessary to use the formula to help you compare and contrast the speeds of the tortoise and the hare. Explain how you could compare and contrast their speeds just by looking at the distance-time graph, without performing calculations.

9. Provide a detailed summary of the events that took place while the Tortoise raced the Hare.

Part 2

The data below shows the speed of a cheetah as it chases down dinner. Use the data to create a distance-time graph.

Distance (meters)	Time (seconds)
30	1
60	2
90	3
120	4
120	5



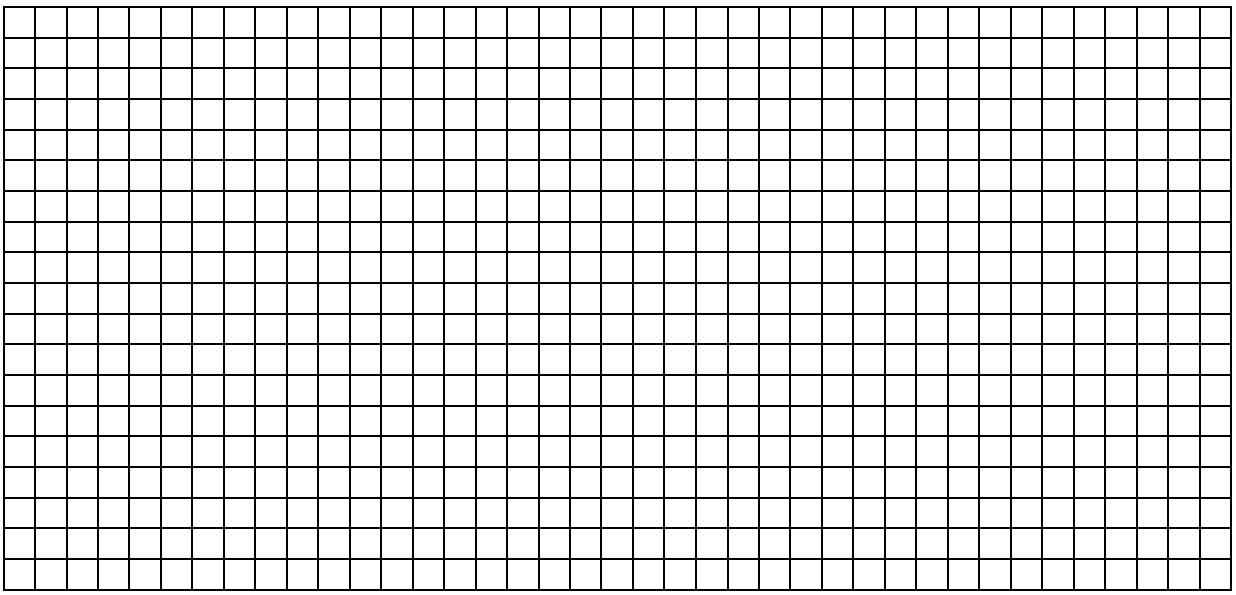
1. How would you describe the cheetah's speed for the <u>first four seconds</u>?

2. What is the cheetah's speed for the <u>first four seconds</u>? **Show your work!**

3. What can you infer about the event(s) that took place once the cheetah reached 120 meters?

Part 3

Generate a line graph and provide a detailed summary of events below.



Summary