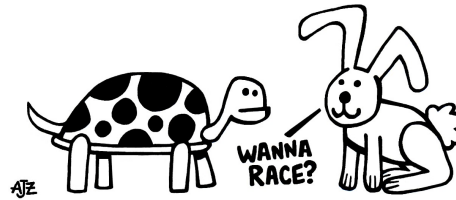


# The TRUE Story of the Tortoise and the Hare

Name \_\_\_\_\_ Pr. \_\_\_\_\_



Motion can be described in many ways. How fast did an object go? How far did an object go? Where did the object go? Did the object slow down or speed up? Did it turn to the left or right? Speed is the distance traveled by an object in a given amount of time ( $s = d/t$ ). We can give even more information about an object's motion by describing its velocity. Remember that velocity is the speed of an object in a given direction. An example would be a plane traveling 600 km/hr in a westward direction. Acceleration or deceleration is when the speed or velocity of an object changes over time. In this activity you will have the opportunity to practice graphing speed, and acceleration.

You have heard the story of the tortoise and the hare. The hare crossed the finish line two minutes after the tortoise. Everyone teased the hare that he had a slower speed than the tortoise. The hare was furious! "I'm much faster than the tortoise!" he declared, but no one would listen to him. "There's more to the story," he insisted, but everyone said he was just a sore loser!

Luckily, observers were stationed every 200 meters along the course and recorded data as the race was run. Study the data carefully!

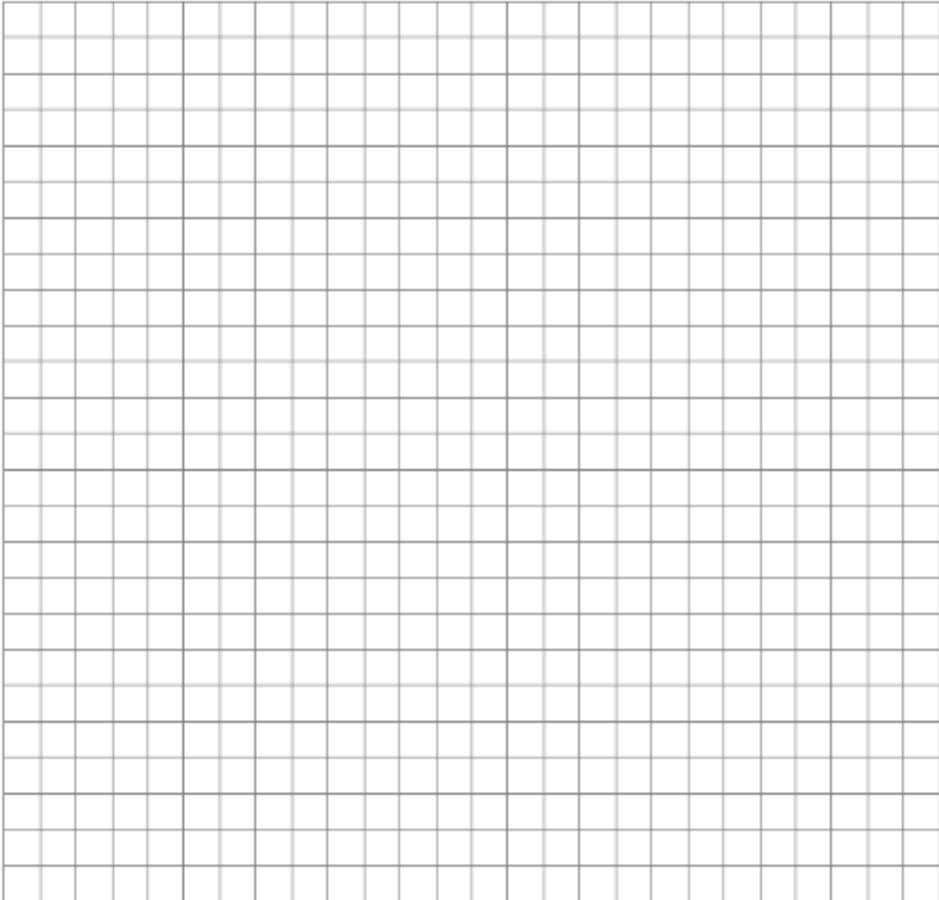
Construct a double line graph using the data table on the next page and compare the hare and tortoise's speed.



STATION	HARE'S TIME	TORTOISE'S TIME
Start	0 minutes	0 minutes
200 meters	2 minutes	50 minutes
400 meters	4 minutes	100 minutes
600 meters	6 minutes	150 minutes
800 meters	8 minutes (At this point the hare lay down and rested for 242 minutes)	200 minutes
1000 meters	252 minutes	250 minutes

**DATA TABLE:**

**GRAPH:** Create a double line graph. One line will represent the hare, and one will represent the tortoise. Include a title, label each line, label both axis, and include units!



Use your **graph and the map of the race** to answer the following questions:

- **(Speed = distance/time)**
- **Constant Velocity** - when a moving object continues to move in the same direction, with the same speed for the entire trip

1. What was the tortoise's speed throughout the race? \_\_\_\_\_
2. Did the tortoise travel at a constant speed? \_\_\_\_\_
3. Did the hare travel at a constant speed? Explain. \_\_\_\_\_  
\_\_\_\_\_
4. Did the tortoise travel at a constant velocity? Explain. \_\_\_\_\_  
\_\_\_\_\_
5. Did the hare travel at a constant velocity? Explain. \_\_\_\_\_  
\_\_\_\_\_
6. Was the tortoise or the hare traveling faster at 30 minutes? \_\_\_\_\_
7. Was the tortoise or the hare traveling faster at 50 minutes? \_\_\_\_\_
8. Was the tortoise or the hare traveling faster at 100 minutes? \_\_\_\_\_
9. At what time did the tortoise pass the hare? \_\_\_\_\_
10. The race was 1000 m long. Which animal won the race? \_\_\_\_\_