Name _____ Class _____ Date _____

Skills Worksheet

INTEGRATING MATHEMATICS

Cross-Disciplinary

Jesse Owens in the 100-Meter Dash

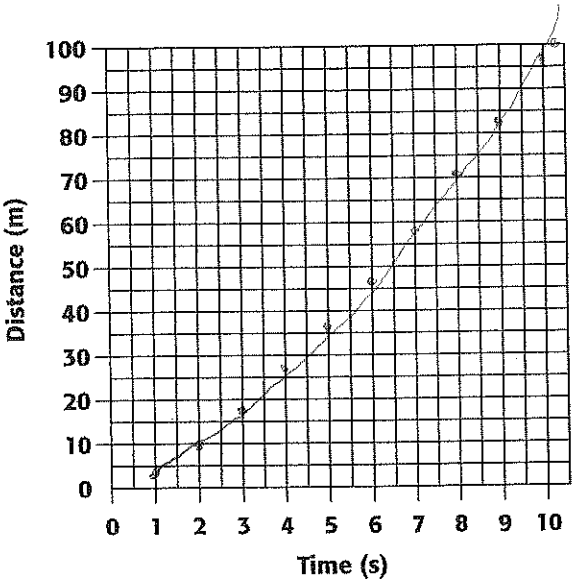
Read the following paragraph, and complete the exercises below.

Jesse Owens was an outstanding American athlete who held several world records in track and field. He won four gold medals at the 1936 Olympic Games in Berlin, Germany. One of these medals was for the 100-meter dash, in which Owens tied the Olympic record with a time of 10.3 s.

EXERCISES

1. Using the data in the first two columns of the table below, plot a graph of distance vs. time for a sprinter in the 100-meter dash.

Time (s)	Total distance (m)	Average speed (m/s)
1.0	4	
2.0	10	
3.0	18	
4.0	27	
5.0	37	
6.0	48	
7.0	59	
8.0	71	
9.0	83	
10.0	96	
10.3	100	



2. Look at the graph, and identify the point where the graph appears to have the steepest slope. What does this tell you about the motion of the sprinter? Explain your answer.

_____

_____

_____

3. Complete the table by calculating the sprinter's average speed for each 1 s time interval. (**Hint:** To find the average speed in each 1 s time interval, you must know the distance that the sprinter covered in that time interval. Notice, however, that the second column of the table only gives you the *total* distance that the sprinter had covered by that point in the race.)