NYC Marathon Quarter 1 Review Task Name:_____ Alg:___

The New York City Marathon was last weekend. Over 50,000 people ran 26.2 miles around the city!

1. The 2015 male winner was Stanely Biwott, his time was 2 hours and 10 minutes. ***Round your answers to the hundredths place***

Total Time in Minutes	Average Rate in *MINUETES PER MILE*
Total Time in Hours	Average Rate in *MILES PER HOUR*

2. The 2015 female winner was Mary Keitany, her time was 2 hours and 24 minutes. ***Round your answers to the hundredths place***

Total Time in Minutes	Average Rate in *MINUETES PER MILE*
Total Time in Hours	Average Rate in *MILES PER HOUR*

3. Use the information in the table below using the given information; remember the course distance is 26.2 miles. (show your work) ***Round your answers to the tenths place***

	Time	Total Minutes	Pace (minutes per mile)
Male course record	2hs 5 minutes		
Average Male time	4 hours 16 mins		
Last Place Finisher Time 2014	9 hours 46 mins		

4. What is the difference between the male course record pace and the average male pace?

What is the percent increase from the course record pace to the average pace?

5. Estimate how long it would take you to jog one mile (keep in mind that an average pace for someone who doesn't run regularly is approximately 10-12 minutes per mile). _____

Use your pace to estimate how long it would take you to run the entire course.

_____hrs and _____ mins

Is your total time closer to the first place finisher, average or last place?

6. The following table shows the number of wins between 1970 and 2014 (79 races in total with the males and female wins separate) for the top five countries. Find the percent of total wins each country has. (show your work) ***Round your answers to the nearest tenth of a percent***

Country	Number of Wins	Percent of Wins
United States	21	
Kenya	20	
Norway	10	
Britain	11	
Italy	5	

7. In 2013 there were 58,456 entrants in the marathon.

    a. 60.74% of the entrants were men. Determine the total number of male and female entrants in the 2013 race.

    b. 7,670 of the entrants were in their twenties. Determine the percentage of the total runners. ***Round your answers to the tenths place***

8. In 1975 only 1/10 of the total entrants were women and in 2013 2/5 of the entrants were women. In 1975 there were 2,021 entrants and in 2014 there were 59,130.
    a. Determine the total number of women that entered the race in each year.

    b. Find the percent increase in the number of women who participated from 1975 to 2014.

9. The graph to the right shows one runners speed over the course of the race.

    a. Write a full sentence to describe what this graph tells you about this runner's race.

    b. Using the information in the graph, make an estimate of the runners average speed in miles per hour.

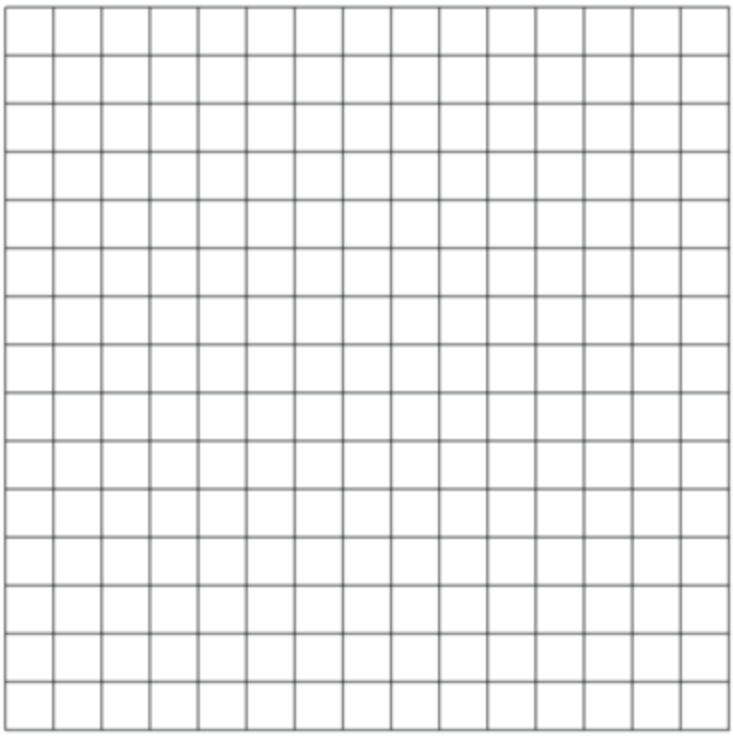
    c. Use your estimate to determine an approximate total marathon time for the runner.

10. Christopher is running the marathon next year and is starting to train. He has decided to run 30 minutes flat and add 5 minutes each day for the month.

    a. Fill in this chart for Christopher's training:

Day	1		5	10		20	30
Minutes Ran		45			105		

    b. Graph your points on the chart provided. Be sure to label each axis with an appropriate scale (you cannot go up by 1s)



    c. Write a function r(x) that represents how many minutes Christopher will run on any given day of the month.

d. Use your function to determine an approximate number of minutes Christopher will run over the course of an entire month (30 days)

If Christopher's average pace if 9 minutes per mile, determine the total number of miles Christopher will run in a month.

Use your previous answer to figure out how many minutes and miles Chris will run over the course of his one year training period.

e. On Sunday Christopher decides to do a special training session at the gym. He only has a certain amount of time to work out. He figured he can either spend 10 minutes stretching, do 10 sprints and lift weights for 30 minutes, OR he can spend 11 minutes stretching do 18 sprints and lift weights for 25 minutes.

If *s= minutes per sprint*, write an equation with the variable on each side that represents this situation.

Solve your equation to determine the amount of time it takes Christopher to complete one sprint.

Use your answer to figure out how much time Christopher has to spend at the gym.