Review – Scatter Plots and Frequency Tables Name: _____

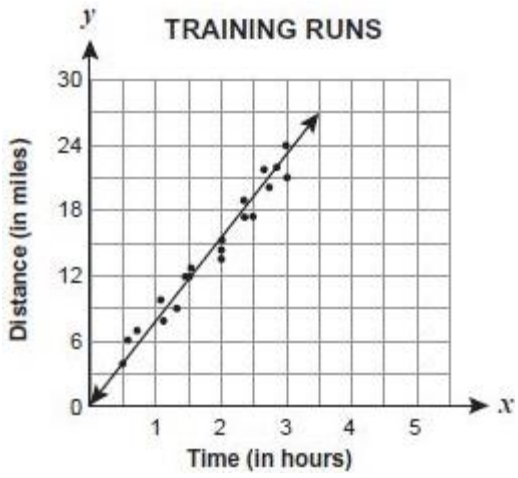
Task 1

1) Find the slope of the line of best fit, and describe what it means in the context of the situation.

2) Find the y-intercept of the line of best fit, and describe what it means in the context of the situation.

3) Write an equation in the form y=mx+b for the line of best fit.

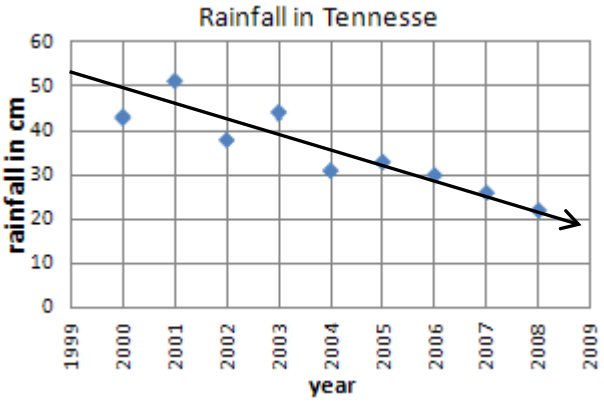
4) Use your equation to predict the distance of a four-hour training run.



Task 2

1) Find the slope of the line of best fit, and describe what it means in the context of the situation.

2) Find the y-intercept of the line of best fit, and describe what it means in the context of the situation. (You can assume that x = 0 represents year 1999)



3) Write an equation in the form y=mx+b for the line of best fit, where x is the number of years after 1999.

4) Use your equation to predict the amount of rainfall in Tennessee in 2016.

Task 3

A high school ran a survey on hair color. Use the information in the frequency table to answer the questions.

1) What percentage of the school is a 10th grader with black hair?

2) What percentage of the school is a 9th grader?

3) What percentage of the 12th graders have blond hair?

4) What percentage of the redheads are older than 10th graders?

Grade	Hair Color				
	Blond	Brown	Black	Red	Total
9th	45	41	61	3	150
10th	25	35	60	5	125
11th	36	48	34	2	120
12th	20	29	51	5	105
Total	126	153	206	15	500

5) Out of all the underclassmen (9th and 10th graders), what percentage of them do not have blond hair?

6) Who was more likely to have red hair – 10th graders or 12th graders? Justify your reasoning with numbers.

Task 4

180 middle schoolers took a survey about their grade point average and whether or not they played a sport. There were 125 total middle schoolers who had a GPA of over 3.0. Out of the 70 middle schoolers who played a sport, 15 of them had a GPA under 3.0.

	Plays Sport	Does Not Play Sport
GPA over 3.0		
GPA under 3.0		

1) Complete the frequency table.

2) Is there a correlation between the middle schoolers' GPA and whether or not they played a sport? (In other words, based on this sample, who is more likely to have a GPA over 3.0 – sport-players or non sport-players?) Justify your reasoning.

Task 5

1) The table below shows the number of points per game (PPG) scored by 20 NBA players in the 2015-16 season, along with their 2015-16 salary. Create a scatter plot of the data. Put points per game as the x-axis and their salary on the y-axis. Be sure to choose appropriate intervals for your x and y-axis.

2) Is there a positive, negative, or no correlation? What does this correlation mean?

3) Do you think the correlation is strong, moderate, or weak? Why?

4) Do you see any outliers? What causes them to be outliers?

Player	PPG	Salary
Kobe Bryant	17.6	$25,000,000
LeBron James	25.3	$23,000,000
Carmelo Anthony	21.8	$22,900,000
Kevin Durant	28.2	$22,000,000
Chris Paul	19.5	$21,500,000
Dwyane Wade	19	$20,000,000
Russell Westbrook	23.5	$16,700,000
James Harden	29	$15,700,000
Roy Hibbert	5.9	$15,500,000
Demarcus Cousins	26.9	$14,700,000
John Wall	19.9	$14,700,000
Draymond Green	14	$14,300,000
Stephen Curry	30.1	$11,200,000
Luol Deng	12.3	$10,100,000
Dirk Nowitzki	18.3	$8,200,000
Tim Duncan	8.6	$5,200,000
Victor Oladipo	16	$5,100,000
Kristaps Porzingis	14.3	$4,000,000
Paul Pierce	6.1	$3,300,000
Jeremy Lin	11.7	$2,100,000