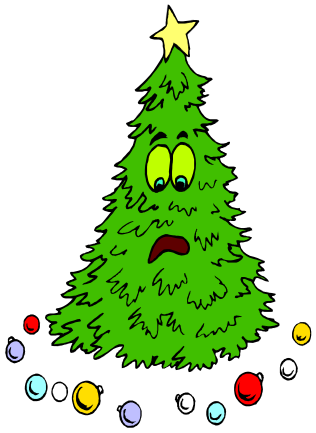
1. Use the data in the table below to answer the following questions.

Year	Number of Artificial Christmas Trees
1990	36319775
1991	38866878
1992	38023230
1993	41590362
1994	40784545
1995	39353100
1996	39596000
1998	37362178
1999	44458040
2000	50590520
2001	60269000
2002	57200000



a. Find :

i. Mean 43701135.67

ii. Median

40190272.5

iii. Standard Deviation

7998550.645

iv. Variance $6.397681242x10^{13}$

b. Find the equation of the line of best fit.

___ $y = 1595582.436x - 3140948441$ __

c. Find the correlation coefficient.

$r = .8090044194$

d. What does this value tell us about the equation in (b)?

___It is a good fit to the data_____

2. Find the interquartile range and any outliers in the data given for #12.

_____ 9079226 ___

_____no outliers____

3. A blizzard Find the population variance in the data in the set below.

$\{56, 78, 42, 80, 79, 43, 75, 99, 80, 100, 60, 72, 85, 88, 96, 98, 53, 82, 87, 71\}$

__ 294.36 __

4. Find the sample variance in the frequency table below.

x_i	f_i
65	2
70	3
75	7
80	12

85	10
90	4

_42.54978663__

5. Find the interquartile range and any outliers in the set of data below.

$\{5,10,20,25,22,23,27,30,32,24,31,26,30,35\}$

____8__
_____5___

6. If the set of data in #5 represents a sample, what is the standard deviation?

_8.305962376
__

7. Find the interquartile range and any outliers in the set of data below.

$\{210,300,250,180,350,600,480,200,195,215,285,245,260,275\}$

_____90_____

_____480,600___

8. If the set of data in #7 represents a population, what is the standard deviation?

__
113.9890122_
___

9. Explain the relationship between standard deviation and variance.

____Standard deviation is the square root of variance, variance is standard deviation squared.

10. If a set of test scores is normally distributed with a mean of 82 and a standard deviation of 8, what percent of the scores would you expect to fall between 78 and 94?

___
62.4%
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11. If a set of 200 children's weights is normally distributed with a mean of 68 pounds and a standard deviation of 5, how many children would you expect to weight more than 78 pounds?

_____
5 ____

12. A certain brand of tires has a "life" that is normally distributed with a mean of 63,000 miles and a standard deviation of 9000. If you have these tires on your car, is it more likely that one will go flat between 49,500 miles and 58,500 miles or between 72,000 miles and 81,000 miles?

____between 49,500 miles and 58,500 miles___