

Homework 3/6/13
AC PreCalculus

1. Complete by hand.

The speeds, in miles per hour, of five different cars on a local highway are 69, 62, 64, 60, and 65. (a) Find the standard deviation of the speeds. (b) Find the standard deviation of the speeds if the cars are driven 10 miles per hour slower. (c) Compare the standard deviations.

2. Complete by calculator.

The data sets below give the quiz scores for the students in two different biology classes.

Class A: 15, 17, 17, 17, 18, 19, 21, 22, 25

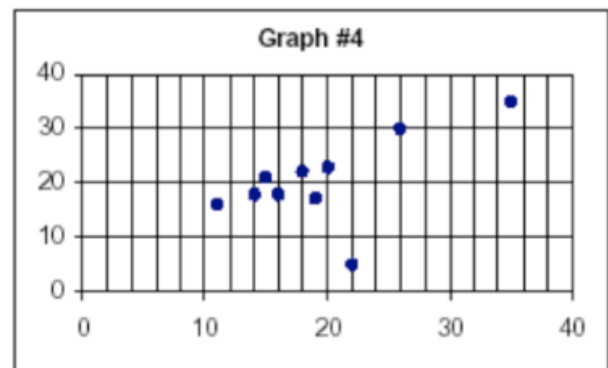
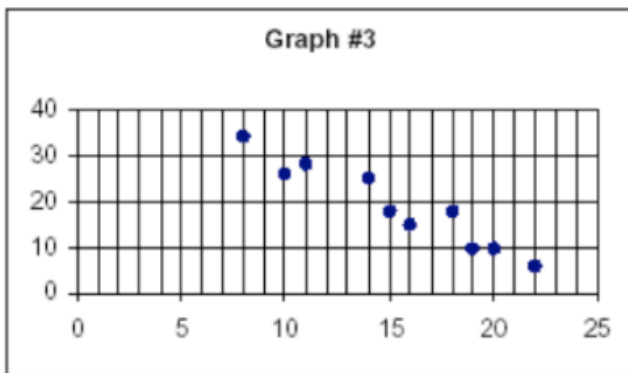
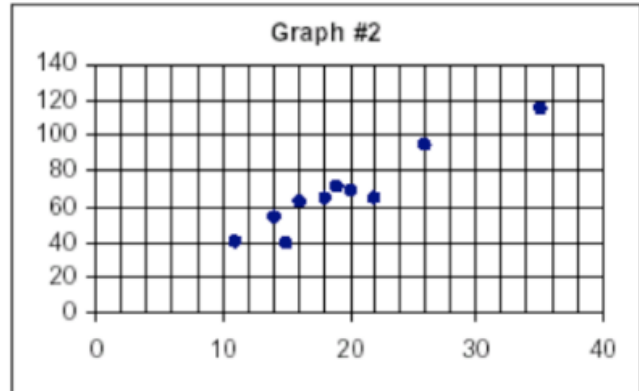
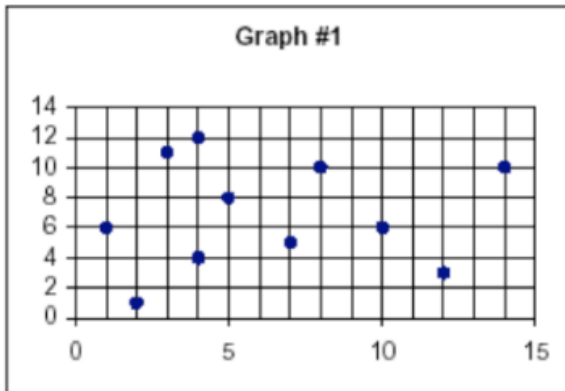
Class B: 16, 18, 19, 21, 22, 22, 22, 24, 25

a. Find the mean and standard deviation for each class.

b. Compare the mean and standard deviation of the two classes.

c. What conclusions can you draw?

3. Draw an estimated best fit line. Then determine if it has a negative, positive, or no correlation. Estimate an r value.



4. **EDUCATION** The table at the right gives the number of hours spent studying for a science exam and the final exam grade.

Study Hours	3	2	5	1	0	4	3
Grade	84	77	92	70	60	90	75

- Draw a scatter plot of the data and draw in the line of best fit.
- What is the equation for the line of best fit?
- Predict the grade for a student who studied for 6 hours.
- Could this line go on forever? Why or why not?

