Economics of Education
Assignment 2
Due May 22

Use the data in the accompanying spread sheet to answer the following questions. In each case, the objective is to determine to divide the students into two classes of five to maximize the listed objective. You must report the student ID numbers of the students in each class in each case as well as the maximized value.

(1) What is the best way to split the students into two classes if each student's end of year skill level is given by, $A_i = a_i + q + \frac{\sum_1^5 a_i}{5}$, where the sum is over the kids in each class, if the objective is to maximize:

   a. The average score of all 10 students?
   b. To maximize the average score of the top 2 students (which means that you don't care about the other 8 students)?

(2) What is the best way to split the students into two classes if each student's end of year skill level is given by, $A_i = a_i + q + \min$, where min is the average of the lowest two a_i's in the class, if the objective is to maximize:
   a. The average score of all 10 students?
   b. To maximize the average score of the top 2 students?

(3) What is the best way to split the students into two classes if each student's end of year skill level is given by, $A_i = a_i + q + \max$, where min is the average of the highest two a_i's in the class, if the objective is to maximize:
   a. The average score of all 10 students?
   b. To maximize the average score of the top 2 students?

(4) What is the best way to split the students into two classes if each student's end of year skill level is given by, $A_i = a_i \times q \times \frac{\sum_1^5 a_i}{5}$, where the sum is over the kids in each class, if the objective is to maximize:

   a. The average score of all 10 students?
   b. To maximize the average score of the top 2 students?

(5) What is the best way to split the students into two classes if each student's end of year skill level is given by, $A_i = a_i \times q \times \min$, where min is the average of the lowest two a_i's in the class, if the objective is to maximize:
   a. The average score of all 10 students?
   b. To maximize the average score of the top 2 students?

(6) What is the best way to split the students into two classes if each student's end of year skill level is given by, $A_i = a_i \times q \times \max$, where min is the average of the highest two a_i's in the class, if the objective is to maximize:
   a. The average score of all 10 students?
   b. To maximize the average score of the top 2 students?