[Weighted Averages Homework]

DIRECTIONS: Please answer the following questions on a separate piece of paper. Show all work and clearly identify your answer for full credit. Answers with no explanation will not receive full credit.

1. Consider a class where homework is 40%, exams are 30% and the final is 30%. Suppose you have the following scores.

	HW1	HW2	HW3	HW4	HW5	Exam 1	Exam 2	Final
score	10	6	9	15	12	40	56	83
Possible points	15	11	10	16	12	70	60	92

   a. What is your final grade?
   b. What is your final grade if the lowest homework score is dropped?
   c. What is your final grade if you lowest exam score is replaced with your final exam score?

2. You want to purchase a vacuum. You have decided that you will judge the vacuums based on the following categories: price, power, attachments, and weight. Each category is worth 10 points where 10 is considered the best score possible. You've also narrowed your selection down to three vacuums. The following table gives the scores you assigned for each vacuum.

	Price	Power	Attachments	Weight
Vacuum 1	7	9	4	5
Vacuum 2	9	4	7	6
Vacuum 3	2	9	9	7

   a. If each category is worth the same (all have equal weights), which vacuum should you buy?
   b. If the price is 50% of the deciding factor, power is 15%, attachments is 15%, and weight is 20%, which vacuum do you buy?
   c. If price is 25% of the deciding factor, power is 40%, attachments is 10%, and weight is 25%, then which vacuum do you buy?