How many points do you need on the final to get the desired course grade?

1. Points accumulated so far: 
   - 3 x ExAve
   - 2 x Lab
   - 1 x Quiz
   - \( \frac{1}{2} \) x Gquiz

   Sum these four factors.

2. Total points for each grade: 
   - A > 850 x 0.87 = 739.5
   - B > 850 x 0.72 = 612
   - C > 850 x 0.57 = 484.5
   - D > 850 x 0.45 = 382.5

   Subtract the sum of the four factors from the total points needed for the letter grade to determine how many points you need to score on the final to meet the total average criterion.

3. Exam points for each grade: 
   - A > 500 x 0.82 = 410
   - B > 500 x 0.65 = 325
   - C > 500 x 0.50 = 250
   - D > 500 x 0.40 = 200

   Subtract 3 x ExAve from the total points needed for the letter grade to determine how many points you need to score on the final to meet the exam average criterion.

4. The score needed on the final is the larger of these two results.