## Exemption from the Final Exam

Q: How do I get out of the Final Exam?
A: You need to have a B+ or higher average on the three mid-term exams.
Q: What does that mean?
A: The highest exam is worth 20 points and the other two exams are worth 15 points. That is a total of 50 points from exam grades. The cutoff for a B+is $81.5 \%$. That means you need to have $50 \times 0.815=40.75$ points from your exams.

For example, highest exam $=16$, other exams 15 and 14 . Total points are

$$
\frac{16}{20}(20)+\frac{15+14}{20}(15)=37.75
$$

(The 20 appears in the denominators since each exam has 20 questions.) Since this number is less than 40.75 , the final exam is not exempted.

Q: This is very complicated! Is there an easier way to explain this?
A: The table should help:

| Highest Exam | Minimum sum of the other two exams needed | Points | Percentage |
| :---: | :---: | :---: | :---: |
| 20 | 28 | 41 | $82 \%$ |
| 19 | 29 | 40.75 | $81.5 \%$ |
| 18 | 31 | 41.25 | $82.5 \%$ |
| 17 | 32 | 41 | $82 \%$ |

Suppose the highest exam score is 19 . The sum of the scores for the other two exams must equal or exceed 29. A 14 and 15 would do. An 18 and 11 would work as well. You can now see what score you need on the third exam to be able to skip the final.

