Math 1160 - Section 5.4 Answer Key

2. 2 x 3 = **6** outfits

4. 26 x 25 = **650** words

8. 26 x 26 x 10 x 10 x 10 x 10 = **6,760,000** license plates

10. 4 x 3 x 2 x 1 = **24** ways

11. 2 x 2 x 2 x 2 x 2 x 2 = 2^6 = **64** sequences

19. 2 x 2 x 2 x 2 x 2 = 2^5 = **32** ways

20. 26 x 26 = **676 possible pairs of initials. In a room with 700 people, some people will share the same initials.**

24a. 8 x 7 x 6 x 5 x 4 x 3 x 2 x 1 = **40,320** ways
24b. 3 x 2 x 1 x 5 x 4 x 3 x 2 x 1 = **720** ways (girls, boys)
Multiply the number of arrangements of girls (front row) and boys (back row) because both requirements must be met.

40. 7 x 7 x 4 = **196** (only the last digit defines an odd number)

52. 5 x 2 x 3 x 2 x 2 x 8 = **960** cars

58. 8 x 1 x 6 x 1 x 4 x 1 x 2 x 1 = **384** ways