Worksheet §3.1–3.4

1. Compute $\frac{100!}{98!}$.

2. How many odd 5-digit numbers are there for which no digit is 0 and the digit 6 appears exactly once?

3. Five math majors and 4 communications majors take seats in a row of chairs, so that no two consecutive people have the same major. How many ways can this be done?

4. Nine people sit in a row of chairs. But two of them hate each other, and will not sit next to each other. How many ways are there of seating all 9?

5. How many necklaces with 5 beads, all of different colors, are there?