

## 5.3

2. Let  $S = \{100, 101, 102, \dots, 999\}$  so that  $|S| = 900$ .
  - (a) How many numbers in  $S$  have at least one digit that is a 3 or a 7?
  - (b) How many numbers in  $S$  have at least one digit that is a 3 and at least one digit that is a 7?
4. An investor has 7 \$1000 bills to distribute among 3 mutual friends.
  - (a) In how many ways can she invest her money?
  - (b) In how many ways can she invest her money if each fund must get at least \$1000.