

1) Plant A makes 53% of the radios for a company. Plant B makes 34%. Plant C makes the rest. 5% of the radios from plant A are defective, 3% of the radios from plant B are defective, and 9% of the radios from plant C are defective. (4 decimal places)

- Find the probability that a random selected radio is defective.
- Find the probability that a randomly selected radio is not defective.
- Find the probability a randomly selected radio is defective, given that it came from plant A.
- If a radio is defective, find the probability that it came from plant C.
- If a radio is defective, find the probability that it didn't come from plant C.

2) 59% of Martians are female. The rest are male. 73% of Martian females own death rays. 52% of Martian males own death rays. (4 decimal places)

- Find the probability that a randomly selected Martian owns a death ray.
- Find the probability that a Martian is male, given that it owns a death ray.
- Find the probability that a Martian is female, given that it owns a death ray.

3) A box contains 3 red and 7 blue marbles, If we randomly pull 4 marbles out of the box **WITH REPLACEMENT**, then.....

- Find the probability that exactly 3 are red; (4 decimal places)
- Find the probability that at least 1 is red;

4) If we roll a six sided die 5 times. (4 decimal places)

- Find the probability that the first two rolls are sixes, and the rest are not.
- Find the probability of rolling exactly two sixes.

5) 10 cards are randomly selected from a standard 52 card deck **WITH REPLACEMENT**.

Find the probability that; (4 decimal places)

- exactly one is a king.
- at most two are kings.
- at least two are kings.
- less than three are kings.

6) Nancy is taking an 8 question multiple choice quiz. Each question has choices A, B, C, or D.

If she guesses on all of the questions, then find the probability that; (4 decimal places)

- she gets them all correct.
- she gets none correct.
- she gets exactly 3 correct.

### Solutions to Practice 5 (revision 1)

1a) .0484    b) .9516    c) .05    d) .2417    e) .7583    2a) .6439    b) .3311    c) .6689

3a) .0756    b) .7599

4a) .0161    b) .1608    5a) .3743    b) .9638    c) .1766    d) .9638

6a) .0000    b) .1001    c) .2076