Math 1313
Homework 20
Section 6.4

Use the following problem to answer questions 1 – 3.
An unbiased coin is tossed 20 times.

1. Find the probability that the coin lands heads exactly 11 times.
   a. 0.1602
   b. 0.5731
   c. 0.2941
   d. 0.1527
   e. 0.6374

2. Find the probability that the coin lands tails at most 17 times.
   a. 0.0002
   b. 0.8748
   c. 0.7812
   d. 0.0176
   e. 0.9998

3. Find the probability that the coin lands heads at most 3 times.
   a. 0.0004
   b. 0.9963
   c. 0.9556
   d. 0.8751
   e. 0.0013

Use the following problem to answer questions 4 – 6.
A computer stores receives a box of a certain video game. The box contains 40 games of which 6 are defective. A quality-control inspector randomly chooses 7 games from the box.

4. What is the probability that exactly 2 are defective?
   a. 0.8734
   b. 0.2239
   c. 0.8412
   d. 0.6789
   e. 0.1163

5. What is the probability that exactly 0 are defective?
   a. 0.0439
   b. 0.4536
   c. 0.2886
   d. 0.3941
   e. 0.5278

6. What is the probability that at most 4 are defective?
   a. 0.9998
   b. 0.6102
   c. 0.5464
d. 0.8957
e. 0.2189

Use the following problem to answer questions 7 and 8.
Carrie draws 6 cards simultaneously from a well-shuffled deck of 52 playing cards.
7. What is the probability that she chooses 4 spades and 2 cards that are not spades?
   a. 0.0692
   b. 0.0260
   c. 0.2811
   d. 0.1376
   e. 0.0815

8. What is the probability that she chooses 2 red face cards?
   a. 0.7809
   b. 0.3741
   c. 0.2387
   d. 0.1202
   e. 0.6601

Use the following problem to answer questions 9 and 10.
A group of 25 people contains 11 males and 14 females. Six people are chosen at random.
9. What is the probability that 2 females are chosen?
   a. 0.7412
   b. 0.1696
   c. 0.4278
   d. 0.2233
   e. 0.0609

10. What is the probability that at most 5 male are chosen?
    a. 0.7848
    b. 0.0981
    c. 0.9974
    d. 0.8054
    e. 0.6596