

**Math 1313**  
**Homework 20**  
**Section 6.4**

**Use the following problem to answer questions 1 – 3.**

An unbiased coin is tossed 15 times.

1. Find the probability that the coin lands heads exactly 9 times.
  - a. 0.0003
  - b. 0.3571
  - c. 0.6429
  - d. 0.1527
  - e. 0.4213
  
2. Find the probability that the coin lands tails at most 3 times.
  - a. 0.0002
  - b. 0.0037
  - c. 0.5000
  - d. 0.0176
  - e. 0.8723
  
3. Find the probability that the coin lands heads at least 3 times.
  - a. 0.0005
  - b. 0.9963
  - c. 0.9333
  - d. 0.0003
  - e. 0.8890

**Use the following problem to answer questions 4 – 6.**

A computer stores receives a box of a certain video game. The box contains 35 games of which 4 are defective. A quality-control inspector randomly chooses 6 games from the box.

4. What is the probability that exactly 2 are defective?
  - a. 0.0111
  - b. 0.0075
  - c. 0.1667
  - d. 0.8333
  - e. 0.1163
  
5. What is the probability that 0 are defective?
  - a. 0.05410
  - b. 0.45361
  - c. 0.15473
  - d. 0.00029
  - e. 0.92445
  
6. What is the probability that at most 3 are defective?
  - a. 0.9997
  - b. 0.6102
  - c. 0.5464

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- d. 0.8957
- e. 0.2189

**Use the following problem to answer questions 7 and 8.**

Carrie draws 5 cards simultaneously from a well-shuffled deck of 52 playing cards.

7. What is the probability that she chooses 3 spades and 2 cards that are not spades?
- a. 0.7692
  - b. 0.0782
  - c. 0.2308
  - d. 0.2743
  - e. 0.0815
8. What is the probability that she chooses 2 red face cards?
- a. 0.4308
  - b. 0.2273
  - c. 0.0876
  - d. 0.0962
  - e. 0.1736

**Use the following problem to answer questions 9 and 10.**

A group of 27 people contains 13 males and 14 females. Six people are chosen at random.

9. What is the probability that 1 female is chosen?
- a. 0.1826
  - b. 0.0011
  - c. 0.0654
  - d. 0.3442
  - e. 0.0609
10. What is the probability that at most 1 male is chosen?
- a. 0.3021
  - b. 0.0981
  - c. 0.0909
  - d. 0.2044
  - e. 0.6596