Homework: Probability Rules - Key

1. List the sample space of selecting 3 of the following names (order does not matter): David, Bill, Frank, Rick, and Carl

Ans: DBF, DBR, DBC, DFR, DFC, DRC, BFR, BFC, BRC, FRC

2. Determine if the following is a probability model:

Name	Probability
Call of Duty	0.39
Resident Evil 6	0.21
Gears of War 3	0.10
Super Mario Brothers	0.52

Ans: No, does not add up to 1

3. Determine if the following is a probability model:

Color	Probability
Red	0.30
Blue	0.20
Yellow	0.40
Black	0.10

Ans: Yes, all probabilities add up to 1 and all probabilities are b

4. Construct a probability model for the following frequency table:

Ans:

Item	Probability
Television	0.2443
Computer	0.3130
Radio	0.0382
Speaker	0.0153
Book	0.3893

5. A particular campus has 1025 students with 500 women and 525 men. Find the probability of picking one person at random and it is a woman (round to 2 decimal places if necessary).

Ans: 0.49

6. A single die is rolled, find the probability that the number is 2 or 6. Round to 2 decimal places if necessary.

Ans: 0.33

7. A pair of dice is rolled, find the probability that the sum is 12. Round to 2 decimal places if necessary.

Ans: 0.03

8. Given a standard deck of cards, if one card is pulled out at random, find the probability it is a jack. Round to 2 decimal places if necessary.

Ans: 0.08

9. If a die is rolled one time, what is the probability of getting a number less than 5 or an even number?

Ans: 0.8333

10. A card is drawn from a deck of cards, what is the probability of getting a red queen?

Ans: 0.0385

11. If you bought 20 tickets out of the 121 possible in a lottery, what is the probability that you will win?

Ans: 0.1653

12. If there are two apples, three oranges, and five bananas then find the probability of selecting one fruit at random and getting a banana.

Ans: 0.5