WORKSHEET 4

- 1- If there is a 20% chance that it will rain tomorrow, what is the probability that it will <u>not</u> rain?
 - A. 0
 - B. 0.2
 - C. 1
 - D. 0.8
- 2- The number of outcomes in the sample space for the gender of the children if a family has three children is
 - A. $S = \{BB, GB, BG, GG\}$
 - B. S={BBB, BBG, BGB, BGG, GBB, GBG, GGB, GGG}
 - C. 8
 - D. 3
- 3- "The probability that a storm will happen next week is 50%." This is an example of
 - A. empirical probability
 - B. subjective probability
 - C. classical probability
 - D. a sample space

4- If a family has three children, find the probability that two of them are boys.

- A. 1/8
- B. 1/4
- C. 3/8
- D. 3/4

5- If P(A) = 0.4, P(B) = 0.3, and P(A and B) = 0.12, then the events A and B are said to be:

- A. certain events
- B. dependent events
- C. independent events
- D. mutually exclusive events

6- If P(A and B) = 0.2 and P(B|A) = 0.5, find P(\overline{A}).

- A. 0.6
- B. 0.7
- C. 0.4
- D. 0.9

- 7- It is known that 40% of men are overweight. If 3 men are selected at random, find the probability that <u>all</u> of them are overweight.
 - A. 0.216
 - B. 0.784
 - C. 0.936
 - D. 0.064

**The table below shows the distribution of students in a classroom at King Abdul-Aziz University. Answer the questions (8 and 9).

	Biology	Physics
Female	15	12
Male	15	8

- 8- Find the probability that a student chosen at random is a male or studies biology.
 - A. 0.30
 - B. 1.06
 - C. 0.76
 - D. 0.28
- **9-** Find the probability that a student chosen at random is a female and studies physics.
 - A. 0.60
 - B. 0.24
 - C. 0.44
 - D. 0.22
- 10- Box A contains 4 red balls and 2 white balls. Box B contains 2 red balls and 2 white balls. A die is rolled. If the outcome is an even number, a ball is drawn from box A. If the outcome is an odd number, a ball is drawn from box B. Find the probability that a red ball is drawn.
 - A. 3/8
 - B. 3/5
 - C. 7/12
 - D. 7/6
- 11- A box contains apples and oranges. A person selects two fruits without replacement. If the probability of selecting an apple and an orange is 17/38, and the probability of selecting an orange on the first draw is 5/9, find the probability of selecting an apple on the second draw given that the first fruit selected was an orange.

- A. 0.249
- B. 1
- C. 0.805
- D. 0.444
- 12- A box contains 9 apples, 3 of which are green. If 5 apples were selected at random, find the probability that exactly 2 are green.
 - A. 0.476
 - B. 0.048
 - C. 0.083
 - D. 0.183
- 13- A company's ID cards consist of 2 letters followed by 2 digits. How many different cards can be made if repetitions are not allowed?
 - A. 740
 - B. 58,500
 - C. 776
 - D. 67,600
- 14- A JARIR store has 5 HP laptops and 4 SONY laptops on the counter. If two customers purchased a laptop, find the probability that one of each laptop was purchased.
 - A. 5/9
 - B. 1/20
 - C. 5/18
 - D. 1/4
- 15- How many different ways can 2 tickets be selected from 6 tickets if each ticket wins a different prize?
 - A. 2
 - B. 15
 - C. 12
 - D. 30

Answer Key:

- 1. D
- 2. C
- 3. B
- 4. C
- 5. C
- 6. A
- 7. D
- 8. C
- 9. B
- 10. C
- 11. C
- 12. A 13. B
- 14. A
- 15. D