

# WORKSHEET

**1. If there is a 20% chance that it will rain tomorrow, what is the probability that it will not 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. Probability uses a frequency distribution to compute probabilities**

- a) Empirical probability
- b) Subjective probability
- c) Classical probability
- d) A sample space

**6. If  $P(A \text{ and } B) = 0.2$  and  $P(B|A) = 0.5$ , find  $P(A^c)$ .**

- 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 all of them are overweight.**

- a) 0.216
- b) 0.784
- c) 0.936
- d) 0.064

The table below shows the number of the students in the classroom who studies Biology or Physics at King Abdul-Aziz University. Answer the following two questions (8-9)

	Physics	Biology
Female	12	15
Male	8	15

**8. Find the probability that a student chosen at random is a male or studying Biology?**

- a) 0.3
- b) 0.16
- c) 0.76
- d) 0.84

**9. Find the probability that a student chosen at random is a female and studying Physics?**

- a) 0.7
- b) 0.24
- c) 0.44
- d) 0.16

**10. Box A contains 4 red balls and 2 white balls. Box B contains 2 red balls, 2 white balls. A die is rolled first and if the outcome is an even number a ball is chosen at random from Box A, and if the outcome is an odd number a ball is randomly chosen from Box B. Find the probability that a red ball is chosen?**

- a)  $\frac{3}{8}$
- b)  $\frac{3}{5}$
- c)  $\frac{7}{12}$
- d)  $\frac{6}{7}$

**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  $\frac{17}{38}$ , and the probability of selecting an orange on the first draw is  $\frac{5}{9}$ , 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. 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 are selected from 6 tickets if each ticket wins a different prize?**

- a) 2
- b) 15
- c) 12
- d) 30

**16. How many ways can a person select 4 science books and 3 math's books from 9 science books and 5 math's books**

- a)  $C_4^9 + C_3^5$
- b)  $C_4^9 / C_3^5$
- c)  $C_7^{14}$
- d)  $C_4^9 \times C_3^5$

**17. A box contains 9 apples, 3 of which are defective. if 4 were sold at random, the probability that exactly 2 are defective is**

- a) 0.476
- b) 0.143
- c) 0.357
- d) 0.789

**18. A chance process that leads to well-defined results called outcomes**

- a) Sample space
- b) Outcome
- c) probability experiment
- d) Tree diagram

**Answer Key:**

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