ELM_7th_Unit6_Pre(Please Do Not Write on Test)

1. **Mrs. Garcia has 20 students in her class. Only 12 of these students ride the bus. If she randomly selects a student to bring a snack for the class, what is the probability Mrs. Garcia will choose a student who does not ride the bus?**

   A. $\frac{1}{8}$ B. $\frac{8}{20}$ C. $\frac{12}{20}$ D. $\frac{8}{12}$

2. **There are 7 boys and 6 girls in the drama club at Columbus High School. The principal randomly selects one student from the drama club to represent the school in a competition. What is the probability that the selected student is a boy?**

   A. $\frac{1}{7}$ B. $\frac{6}{13}$ C. $\frac{7}{13}$ D. $\frac{6}{7}$

3. **A student is taking a multiple-choice test that has 60 questions. Each question has four answer choices. If the student guesses randomly on every question, how many questions should the student expect to answer correctly?**

   A. 15 B. 20 C. 25 D. 30

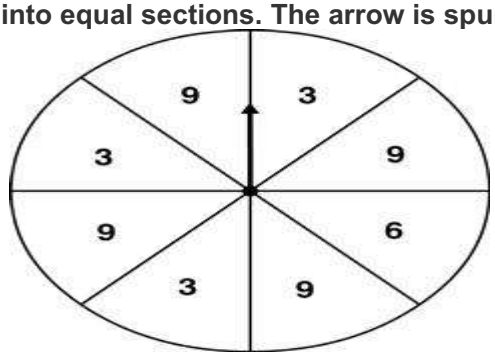
4. **The probability of flipping a heads on an unfair coin is 0.40. If the coin is tossed 500 times, approximately how many times will the coin come up tails?**

   A. 40 B. 200 C. 300 D. 400

5. **A bag contains 2 green balls, 3 yellow balls, and 1 red ball. Simone randomly selects a ball and replaces it. She repeats this process two more times. Each time she selects the red ball. What is the probability Simone will select the red ball on her fourth attempt?**

   A. $\frac{1}{6}$ B. $\frac{1}{4}$ C. $\frac{4}{6}$ D. $\frac{3}{4}$

6. **The spinner is divided into equal sections. The arrow is spun one time**



What is the probability of the arrow landing on a 3?

A. $\frac{1}{8}$ B. $\frac{3}{8}$ C. $\frac{1}{2}$ D. $\frac{3}{4}$

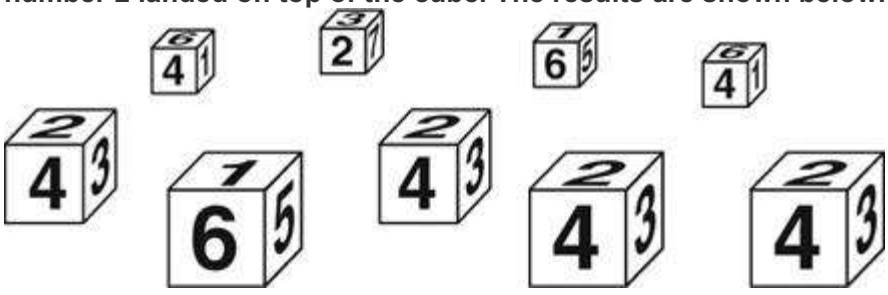
7. A spinner is divided into 6 equal sections. Each section is marked with one of the numbers 1 through 6. Miguel wanted to test his hypothesis that the spinner is most likely to land on the number 1.

Possible Outcome	1	2	3	4	5	6
Number of Occurrences	12	9	14	13	8	5

Which of the following conclusions best supports the results?

A. The number 6 is least likely to occur.
B. The number 1 is most likely to occur.
C. A prime number is most likely to occur.
D. An even number is most likely to occur.

8. Malik rolled a six-sided number cube 9 times. He counted the number of times the number 2 landed on top of the cube. The results are shown below.



What fraction represents the results of Malik's experiment?

A. $\frac{2}{4}$ B. $\frac{4}{2}$ C. $\frac{9}{4}$

D. $\frac{4}{9}$

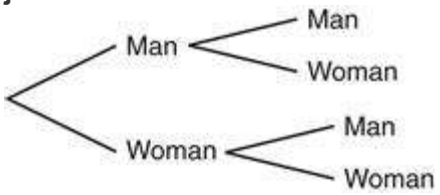
9. A travel agency is giving away a free trip as part of a grand opening. The trip will be to one of the ten locations listed.

London	Paris	Rome	Sydney	Athens
Nassau	Hong Kong	Madrid	Toyko	Rio de Janeiro

What is the probability that a trip will be to either Nassau or Paris?

A. $\frac{1}{20}$ B. $\frac{1}{10}$ C. $\frac{1}{5}$ D. $\frac{1}{4}$

10. A group of 5 men and 5 women are applying for a job at a local company. Each of the 10 job candidates has the same chance of receiving a job offer.



Using the diagram, what is the probability that the company will hire two women for two positions?

A. $\frac{1}{4}$ B. $\frac{1}{2}$ C. $\frac{3}{4}$ D. 1

11. Viviana has three scarves and three coats. She will only wear her red scarf with her wool coat. She does not wear a scarf with her linen coat. Which combination is a possible choice for her to choose?

A. linen coat and fuzzy scarf
B. corduroy coat and red scarf
C. corduroy coat and fancy scarf
D. wool coat and fancy scarf

12. Alec plays sports on Monday, Wednesday, and Friday. He can only play one sport each day.

Sport Choices

Day	Sport
Monday	Basketball

Wednesday	Soccer
Friday	Tennis
	Football
	Baseball

How many different combinations of 1 day and 1 sport are possible for Alec?

A. 3 B. 5 C. 15 D. 30

13. Paul is playing a game with a number cube with faces numbered 1 through 6. If a multiple of 3 shows, he earns 10 points. If a multiple of 4 shows, he earns 5 points, and for each other number, Paul earns 1 point. What is the expected value of the number of points that Paul will earn?

A. $2\frac{1}{2}$ B. $4\frac{2}{3}$ C. $6\frac{1}{4}$ D. $8\frac{1}{3}$

14. Each morning Mr. Elliot rides a city bus to work, and each afternoon he rides a different city bus home from work. He knows from experience that the morning bus is late 20% of the time, and the afternoon bus is late 40% of the time. Which simulation could Mr. Elliot use to determine the probability that both buses will be late on the same day?

A. Randomly select 1 card from a set of cards. The set contains 3 pink cards and 7 green cards.

B. Randomly select 1 card from a set of cards. The set contains 3 pink cards and 10 green cards.

C. Randomly select 1 card from each of two sets of cards. One set contains 1 pink card and 4 green cards, and the other set contains 2 pink cards and 3 green cards.

D. Randomly select 1 card from each of two sets of cards. One set contains 1 pink card and 5 green cards, and the other set contains 2 pink cards and 5 green cards.