

TB(3B) Ch. 11 Introduction to Probability

Multiple Choice Questions

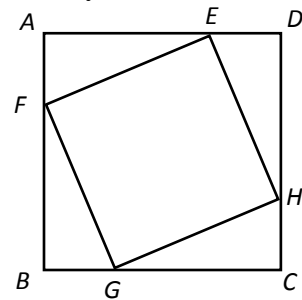
1. [14-15 S.6 Mock Exam #26]

A dice is thrown twice. Find the probability that the number in the second throw is smaller than that of the first throw.

- A. $\frac{7}{12}$ B. $\frac{1}{2}$
 C. $\frac{5}{12}$ D. $\frac{1}{8}$

2. [14-15 S.3 Final Exam #22]

The figure shows a square dart board $ABCD$ with $AE : ED = BF : FA = CG : GB = DH : HC = 2 : 1$. A dart is thrown at random and hits the board. Find the probability of the dart hitting the square $EFGH$.



- A. $\frac{4}{9}$ B. $\frac{1}{2}$
 C. $\frac{5}{9}$ D. $\frac{7}{9}$

3. [15-16 S.3 Final Exam #13]

A survey on the favourite TV programmes of a group of people is conducted. The results are recorded.

	Drama	Sports
Female	83	17
Male	6	94

A person is selected at random from the group. Find the experimental probability that the person is a female who prefers sports programme.

- A. $\frac{94}{100}$ B. $\frac{94}{200}$
 C. $\frac{17}{100}$ D. $\frac{17}{200}$

4. [15-16 S.3 Final Exam #23]

A bag contains 2 green balls, 4 red balls and 6 yellow balls. In a lucky draw, a ball is randomly drawn from the bag and a certain number of tokens will be awarded according to the following table:

Colour of the ball drawn	Yellow	Red	Green
Number of tokens got	10	30	60

Find the expected number of tokens awarded in the lucky draw.

- A. $41\frac{2}{3}$ B. 30
 C. $28\frac{1}{3}$ D. 25

5. [15-16 S.3 Final Exam #24]

An integer between 2 and 26 (including 2 and 26) is chosen at random. Find the probability that the integer is a prime number.

- A. $\frac{3}{8}$ B. $\frac{8}{25}$
C. $\frac{9}{25}$ D. $\frac{9}{28}$

6. [16-17 S.3 Final Exam #8]

A letter is chosen at random from the word 'TRIANGLE'. What is the probability that it is a vowel?

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

7. [16-17 S.3 Final Exam #18]

A dice is thrown twice. Find the probability that the sum of the numbers obtained is a prime number.

- A. $\frac{1}{3}$ B. $\frac{13}{36}$
C. $\frac{5}{12}$ D. $\frac{1}{2}$

8. [17-18 S.3 Final Exam #12]

A dice is thrown 3 times. Find the probability that all the numbers thrown are odd numbers.

- A. $\frac{1}{8}$
B. $\frac{8}{27}$
C. $\frac{4}{9}$
D. $\frac{1}{2}$

9. [17-18 S.3 Final Exam #23]

If a person takes 2 socks at the same time from 5 pairs of socks of different colours, what is the probability that the 2 socks are of the same colour?

- A. $\frac{1}{5}$
B. $\frac{1}{9}$
C. $\frac{1}{10}$
D. $\frac{1}{18}$

10. [17-18 S.3 Final Exam #24]

Bag A and bag B contains some balls. Bag A has 2 green balls and 1 yellow ball while bag B has 1 green ball and 1 yellow ball. If one ball is taken from bag B to bag A randomly, and then another ball is randomly drawn from bag A , find the expected number of green balls remaining in bag A .

- A. $\frac{15}{4}$
 B. $\frac{7}{4}$
 C. $\frac{7}{8}$
 D. $\frac{15}{8}$

11. [18-19 S.3 Final Exam #12]

A die is tossed 100 times. The results are recorded below:

Number	1	2	3	4	5	6
Frequency	9	20	25	27	x	3

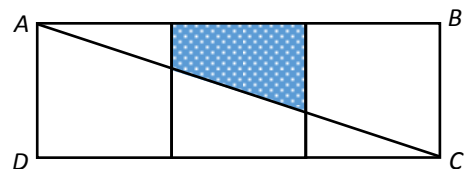
Find the experimental probability of getting a prime number.

- A. $\frac{41}{100}$
 B. $\frac{1}{2}$
 C. $\frac{61}{100}$
 D. $\frac{7}{10}$

12. [18-19 S.3 Final Exam #22]

In the figure, a rectangular dartboard $ABCD$ is formed by three identical squares. AC is a diagonal of the dartboard. Alice throws a dart at random and hits the dartboard. If the dart hits the shaded region, she will get \$24, otherwise she will get \$0. Find the expected value of the prize Alice will win.

- A. \$4
 B. \$5
 C. \$6
 D. \$8



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