TB(3B) Ch. 11 Introduction to Probability

Multiple Choice Questions

1. [13-14 Final Exam #9]
   A fair dice is thrown once. Find the probability that the number is a prime number.

   A. $\dfrac{1}{2}$ **B.** $\dfrac{1}{3}$

   C. $\dfrac{2}{3}$ **D.** $\dfrac{1}{6}$

2. [13-14 Final Exam #10]
   John has 3 T-shirts which are red, yellow and green respectively. He also has 4 pairs of trousers of which two are blue and the other two are black and white respectively. John is going to draw a T-shirt and a pair of trousers randomly.   Find the probability that he can draw a red T-shirt and a pair of blue trousers.

   A. $\dfrac{1}{2}$ **B.** $\dfrac{2}{7}$

   C. $\dfrac{1}{12}$ **D.** $\dfrac{1}{6}$

3. [13-14 Final Exam #26]
   The figure shows a dartboard which is made up of 4 circles with the same centre.   The diameter of the bull's eye is 6 cm.   The other 3 rings have equal width and their total width is 18 cm.   Peter throws a dart randomly and the dart hits the dartboard.   If he hits the bull's eye, he can get the first prize.   If he hits the white region, he can get the second prize.   If he hits the two grey regions, he loses.   Find the probability that he can get the second prize.

   A. $\dfrac{16}{49}$

   B. $\dfrac{25}{49}$

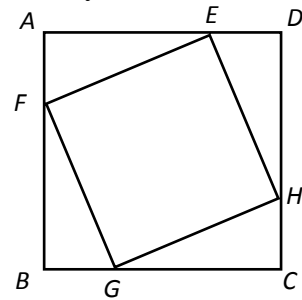   **C.** $\dfrac{2}{7}$

   D. $\dfrac{2}{3}$
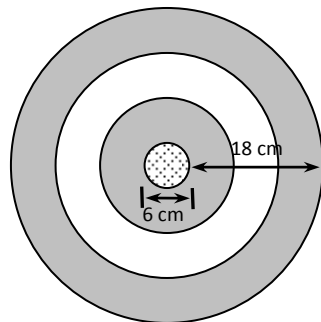
4. [14-15 S.6 Mock Exam #26]
   A dice is thrown twice. Find the probability that the number in the second throw is smaller than that of the first throw.

   A. $\dfrac{7}{12}$ **B.** $\dfrac{1}{2}$

   C. $\dfrac{5}{12}$ **D.** $\dfrac{1}{8}$

5. [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. $\dfrac{4}{9}$ B. $\dfrac{1}{2}$

C. $\dfrac{5}{9}$ D. $\dfrac{7}{9}$

6. [14-15 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. $\dfrac{94}{100}$ B. $\dfrac{94}{200}$

C. $\dfrac{17}{100}$ D. $\dfrac{17}{200}$

7. [14-15 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. $41\dfrac{2}{3}$ B. 30

C. $28\dfrac{1}{3}$ D. 25

8. [14-15 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. $\dfrac{3}{8}$ B. $\dfrac{8}{25}$

C. $\dfrac{9}{25}$ D. $\dfrac{9}{28}$

9.   [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. $\dfrac{94}{100}$ **B.** $\dfrac{94}{200}$

C. $\dfrac{17}{100}$ **D.** $\dfrac{17}{200}$

10.   [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:

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11.   [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. $\dfrac{3}{8}$ B. $\dfrac{8}{25}$

C. $\dfrac{9}{25}$ D. $\dfrac{9}{28}$

12.   [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. $\dfrac{1}{8}$ B. $\dfrac{1}{4}$

C. $\dfrac{3}{8}$ D. $\dfrac{1}{2}$

13.   [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. $\dfrac{1}{3}$ B. $\dfrac{13}{36}$

C. $\dfrac{5}{12}$ D. $\dfrac{1}{2}$

14.   [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. $\dfrac{1}{8}$

B. $\dfrac{8}{27}$

C. $\dfrac{4}{9}$

D. $\dfrac{1}{2}$

15.   [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. $\dfrac{1}{5}$

B. $\dfrac{1}{9}$

C. $\dfrac{1}{10}$

D. $\dfrac{1}{18}$

16.   [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. $\dfrac{15}{4}$

B. $\dfrac{7}{4}$

C. $\dfrac{7}{8}$

D. $\dfrac{15}{8}$

~ End ~