

# Ch 13 Mock Test

SCORE \_\_\_\_\_

1. A spinner has 4 equal sectors numbered 1 to 4. The spinner is spun twice.  
Make an organized list to represent the sample space.

11 13 21 23 31 33 41 43  
12 14 22 24 32 34 42 44

1. \_\_\_\_\_

2. A die is rolled 4 times. How many outcomes are possible?

2.  $6^4 = 12960$

3. Carl is creating greeting cards from a website. He has to choose from the following:  
2 types of paper, 5 different fonts, 5 different greetings inside, and 3 types of envelopes. How many different cards can Carl create?

3. 150

4. Minnie is stacking her 5 textbooks on the shelf in her locker. What is the probability that her Chemistry book will be on top of the stack and her Geometry book will be on the bottom?

4.  $\frac{1}{20}$

5. As part of the National Honors Society ceremony, the six new members are randomly arranged in a circle. What is the probability that the new members are arranged in height order?

5.  $\frac{1}{120}$

6. What is the probability that a randomly selected permutation of the letters shown below will spell "permutation"?

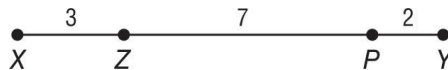
A E I M N O P R T T U

6.  $\frac{1}{19,958,400}$

7. Three of the ten members of the AV club are randomly chosen to read the morning announcements for the month of May. What is the probability that the three freshmen in the club are chosen?

7.  $\frac{1}{120}$

8. Point  $K$  is chosen at random on  $\overline{XY}$ .  
Find  $P(K \text{ is on } \overline{XP})$ .



8.  $\frac{5}{6}$

9. At Khyree's favorite pizza buffet, the pizza is completely replaced every 20 minutes during the 3 hour lunch rush. If he arrives at a random time during the lunch rush, what is the probability he will have to wait longer than 5 minutes for fresh pizza?

9.  $\frac{3}{4}$

10. In a circular spinner, the sector colored yellow as a central angle of  $85^\circ$ .  
What is the probability the pointer will land on yellow?

10.  $\frac{17}{72}$

# Chapter 13 Test, Form 2C *(continued)*

For Questions 11 and 12, use the frequency table and the following information.

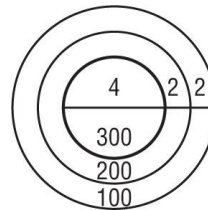
Simon used his statistics from last year and created a simulation using a spinner to find the theoretical probability of his hitting a home run this season.

Outcome	Tally	Frequency
did not reach base		15
Single		25
Double		12
Triple		2
Home run		1

- 11. What is the theoretical probability of Simon hitting a home run this season? 11.  $\frac{1}{55}$
- 12. About what size should you expect the central angle that designates the sector that represented 'double' be in the spinner Simon designed for his simulation? 12.  $79^\circ$
- 13. Two cards are drawn from a standard deck without replacement. What is the probability the first card is an ace and the second card is a king? 13.  $\frac{4}{663}$
- 14. A pair of dice are rolled. What is the probability that a 6 is rolled on each die? 14.  $\frac{1}{36}$
- 15. What is the probability of drawing an ace or spade from a standard deck of cards? 15.  $\frac{4}{13}$

For Questions 17 and 18, use the dart game at the right.

16. Calculate the expected value,  $E(X)$ , of the dart game.



- 17. Find the probability of a point chosen at random being in the 100 point area. 16.  $155.56$
- 18. What is the probability rolling a pair of dice and *not* rolling a 6? 17.  $\frac{5}{9}$
- 19. Of the 100 bags of food the junior class created for the food bank, 91% contained peanut-free items. If two of the bags are chosen at random, what is the probability that at least one of the bags contains peanut-free items? 18.  $\frac{25}{36}$

19.  $0.99$