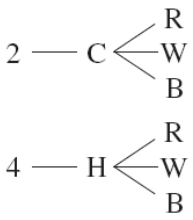
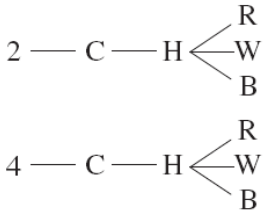
CAHSEE Algebra **Cluster #4: Statistics, Data Analysis, an Probability** **Name:**_____
Assignment #5

1. Carmen wants to buy a new car. Her choices are a 2-door or a 4-door, a convertible top or a hard top, a red, white, or black. Which of the following tree diagrams represents all the possible choices for the car.

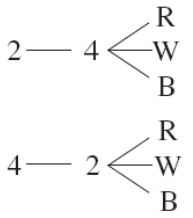
A



C



B



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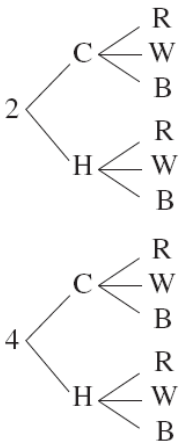


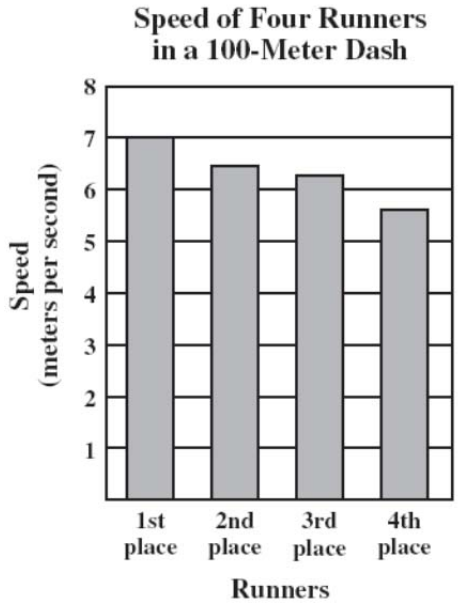
2. A restaurant is advertising 3-item combination specials that must include a main dish, a vegetable, and a drink.

Lunch Specials

Main Dish	*Vegetable*	*Drink*
Chicken	Broccoli	Water
Beef	Carrots	Soft drink
	Peas	Milk
	Corn	

How many 3-item combination include a soft drink and corn?

3. Based on the bar graph shown below, which of the following conclusions is true?



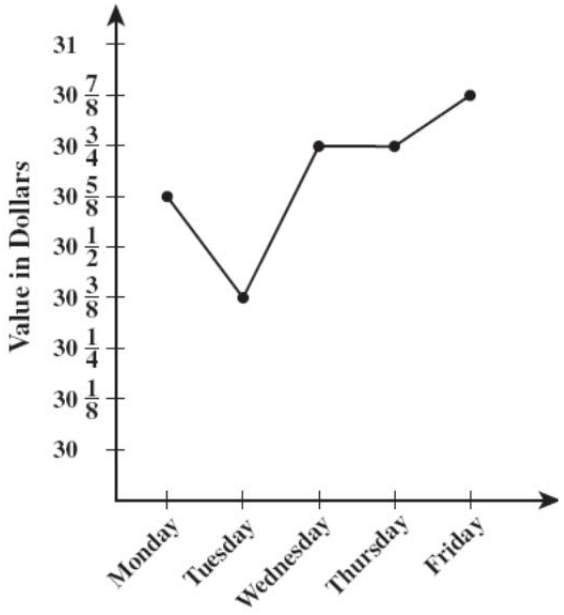
A Everyone ran faster than 6 meters per second.

B The best possible rate for the 100-meter dash is 5 meters per second.

C The first-place runner was four times as fast as the fourth-place runner.

D The second-place and third-place runners were closest in time to one another.

4. The graph below represents the closing price of a share of a certain stock for each day of a week.



Which day had the greatest increase in the value of this stock over that of the previous day?

A Tuesday

B Wednesday

C Thursday

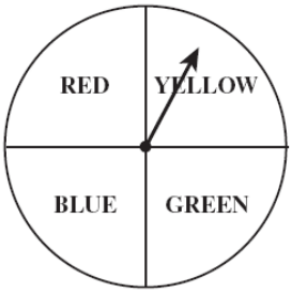
D Friday

5. There are 8 red marbles, 11 blue marbles, and 12 green marbles in a bag. Jessica removed one blue marble from the bag and did NOT put it back. She then randomly removed another marble. What is the probability that the second marble was blue?

6. There are 5 cans of Coca Cola, 8 cans of Sprite, and 7 cans of Sunkist soda in a bucket of ice. If James first takes a can of Sprite, then what is the probability of Samantha randomly selecting a Coca Cola?

7. Ken is shopping at the market for quart of ice cream. In the freezer section there are 7 quarts of Rocky Road, 4 quarts of Cookies n' Cream, 5 quarts of Mint Chip, and 5 quarts of vanilla. Ken takes a quart of Rocky Road, but immediately puts it back. What is the probability that Ken randomly selects a quart of Rocky Road?

8. The spin board below is fair. Joshua and Melissa each take a chance flicking the spinner. If Joshua goes first and lands on blue, what is the probability that Melissa will land on blue as well.



9. If a coin is flipped three times, what is the probability of getting two heads and one tail.

First Coin	Second Coin	Third Coin
H	H	H
H	H	T
H	T	H
H	T	T
T	H	H
T	H	T
T	T	H
T	T	T

10. A die was rolled six times and each time the outcome was a 5. If the die is rolled again, what is the probability that the outcome is a 5 again?

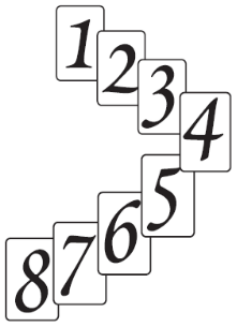
11. What is the probability of getting a tail when flipping a fair coin?

12. What is the probability of getting a three or four when rolling a fair die?

13. What is the probability of rolling an even for a fair die?

14. What is the probability of rolling a 1, 2, 5, or 6 for a fair die.

15. These 8 cards are placed face down and shuffled.

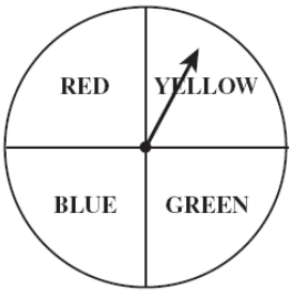


If Beatrice turns over only one card, what is the probability she will get a card with a number more than 6?

16. Fran has 20 CD's in a box: 7 country, 7 rock, 4 dance, and 2 classical. If she takes out one CD without looking, what is the probability that she will pick a dance CD?

17. A bucket contains 5 bottles of apple juice, 7 bottles of orange juice, and 6 bottles of water. If Kira randomly selects a bottle, what is the probability that she will select a drink other than orange juice?

18. The spinner shown below is fair. What is the probability that the spinner will NOT stop on red, yellow, or green if you spin it one time? State the probability as a percentage.



19. What is the probability of not rolling a six for a fair die?

20. Ken's first six paychecks for his job were $115, $102, $76, $83, $92 and $90. What is the mean?

21. The data below shows the number of points scored by the Lakers in the past six games.

95, 123, 112, 99, 110, 127

What is the median price?

22. A list of the number of trips the space shuttle has taken to the moon each year for the past ten years is shown below. What is the mode of the list?

9, 1, 8, 5, 3, 1, 2, 3, 2, 1

Answer Key:

1) D **2)** 2 **3)** D **4)** A **5)** $\frac{1}{3}$ **6)** $\frac{5}{19}$ **7)** $\frac{1}{3}$ **8)** $\frac{1}{4}$ **9)** $\frac{3}{8}$ **10)** $\frac{1}{6}$ **11)** $\frac{1}{2}$ **12)** $\frac{1}{3}$ **13)** $\frac{1}{2}$

14) $\frac{2}{3}$ **15)** $\frac{1}{4}$ **16)** $\frac{1}{5}$ **17)** $\frac{11}{18}$ **18)** 25% **19)** $\frac{5}{6}$ **20)** $93 **21)** 111 **22)**1