

## Unit 6 Practice Test: Probability 7<sup>th</sup> Grade Math NAME: \_\_\_\_\_

1. Fill in the table below. Be exact!

Fraction	Decimal	Percent
$\frac{2}{3}$		
	0.84	
		26%
$\frac{2}{9}$		
		5%
	0.5	
		25%

2. Identify the difference between *theoretical* and *experimental* probability?

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For 3-8, you rolled a fair six sided die 20 times. The results are shown on the table below.

3. Identify the **theoretical** probability of rolling the #5. Be exact!

<u>Fraction</u>	<u>Decimal</u>	<u>Percent</u>
#3 Answers:	_____	_____

4. Identify the **experimental** probability of rolling the #5.

<u>Fraction</u>	<u>Decimal</u>	<u>Percent</u>
#4 Answers:	_____	_____

5. Identify the **theoretical** probability of rolling an odd number.

<u>Fraction</u>	<u>Decimal</u>	<u>Percent</u>
#5 Answers:	_____	_____

Dice #	Frequency
#1	2
#2	6
#3	5
#4	1
#5	3
#6	3

6. Identify the **experimental** probability of rolling an odd number.

<u>Fraction</u>	<u>Decimal</u>	<u>Percent</u>
#6 Answers:	_____	_____

7. Identify the **theoretical** probability of rolling the #7.

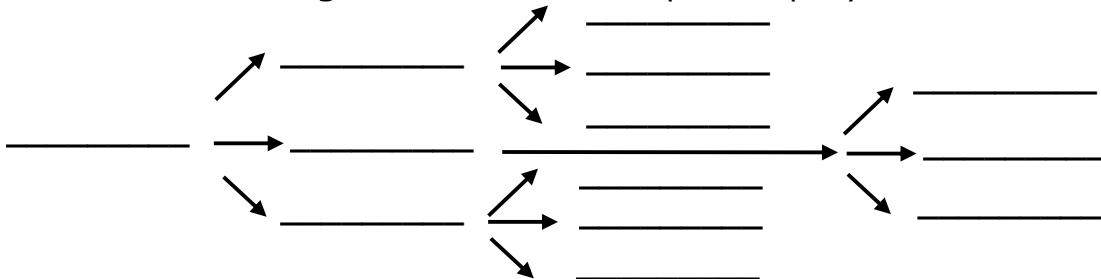
<u>Fraction</u>	<u>Decimal</u>	<u>Percent</u>
#7 Answers:	_____	_____

8. Identify the **experimental** probability of rolling the #7.

<u>Fraction</u>	<u>Decimal</u>	<u>Percent</u>
#8 Answers:	_____	_____

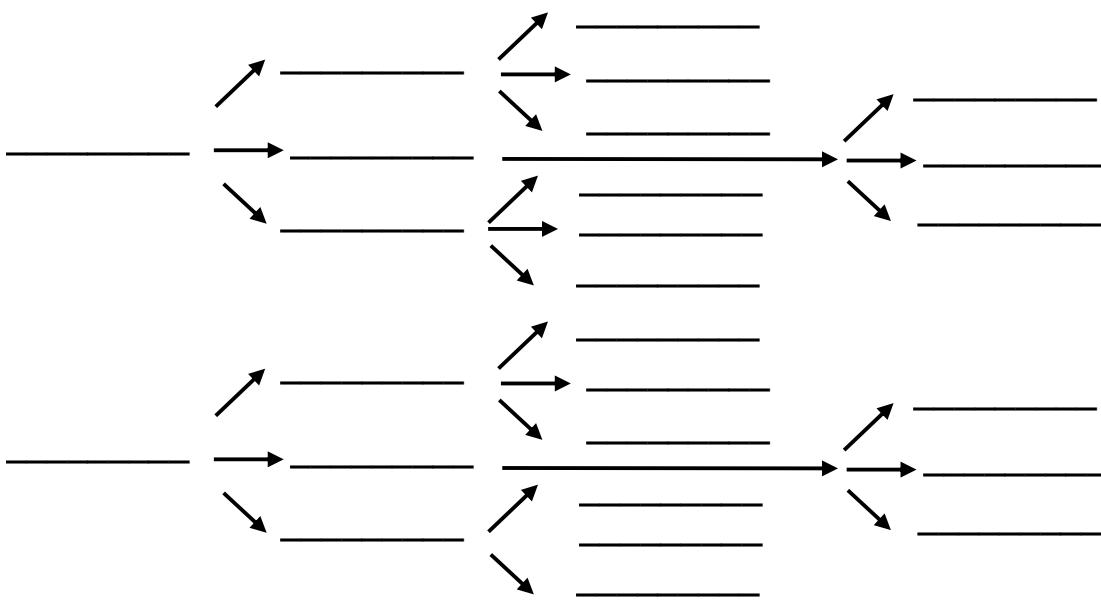
For 9–11, use the following information. Jacob and Jeff are twins and they are having trouble deciding what to do for their birthday party. It can be on Friday, Saturday, or Sunday. They can either swim, watch movies, or play games, and they can eat pizza, burgers, or tacos.

9. Fill-in the **tree diagram** to show all of the possible party combinations.



10. Use the **basic counting principle** to determine the total number of different party combinations.

#10 answer: \_\_\_\_\_

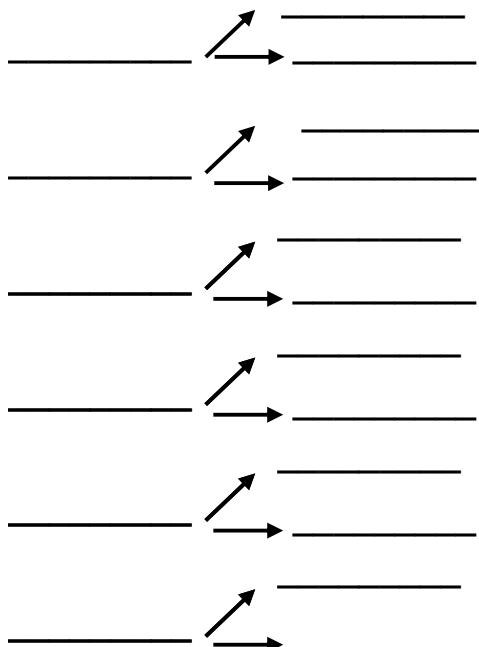


11. If they choose randomly from each category, identify the probability that they will choose to eat tacos?

#11 answer: \_\_\_\_\_

For 12–16, use the following information. In a new board game, players have to roll a fair, six sided die and flip a coin.

12. Fill-in the **tree diagram** to illustrate the total number of combinations that can occur.



13. Use the **basic counting principle** to determine the total number of outcomes.

#13 answer: \_\_\_\_\_

14. Identify the probability that a player will roll the #1 and flip tails in the same turn.

#14 answer: \_\_\_\_\_

15. Identify the probability that a player will roll an even number and flip heads in the same turn.

#15 answer: \_\_\_\_\_

16. Explain the difference between *independent* and *dependent* events.

\_\_\_\_\_

For 17–21, state if the following are examples of independent (I) or dependent events (D):

17. I pull a card from a deck, then I flip a coin 2 times. #17 answer: \_\_\_\_\_
18. I pull a card from a deck, then I pull another (without replacing). #18 answer: \_\_\_\_\_
19. I spin a spinner 3 times. #19 answer: \_\_\_\_\_
20. I pull a test from the pile, replace it, then pull another test. #20 answer: \_\_\_\_\_
21. I hand out candy from my drawer one at a time for students to eat. #21 answer: \_\_\_\_\_
22. On the last test, there were 3 A's, 6 B's, 3 C's, 2 D's, and 2 F's. If I grab one test at random, identify the probability I will grab and A or B? Show your work for full credit.  
#22 answer: \_\_\_\_\_

For 23 & 24, use the following information. A container initially contains 18 titles for a game of charades: 8 movie titles, 3 book titles, 4 TV shows, and 3 plays. Titles are not replaced once used.

23. Is this an example of **independent (I)** or **dependent (D)** events? #23 answer: \_\_\_\_\_
24. Identify the probability that Susan draws a book title, Ted draws a movie title, and Ann randomly selects a movie title in that order? Show your work for full credit. Reduce.  
#24 answer: \_\_\_\_\_

For 25 & 26 use the following information. The bag of assorted granola bars that Karly bought came with 3 chocolate chip, 3 peanut butter, 2 coconut, and 2 fruit bars.

25. Identify the probability that she eats 2 chocolate chip, then 2 peanut butter bars if they are chosen at random? Show your work for full credit.  
#25 answer: \_\_\_\_\_
26. Is this an example of **independent (I)** or **dependent (D)** probability? #26 answer: \_\_\_\_\_

For 27 & 28, use the following information. Lucas's math teacher writes a number from 1 to 10 in a notebook. She then asks students to guess the number.

27. If Lucas has guessed the number correctly three times in a row, identify the probability he will guess the correct number the next time?  
#27 answer: \_\_\_\_\_
28. Is this an example of **independent (I)** or **dependent (D)** probability? #28 answer: \_\_\_\_\_
29. If I flip a coin 6 times, identify the probability that they all will land on head. Show your work for full credit.  
#29 answer: \_\_\_\_\_

30. If I flip a coin, spin this spinner  , then roll a die, identify the probability that the coin is tails, the spinner lands on 1 and the die lands on a number greater than 4. Show your work for full credit. Reduce.

#30 answer: \_\_\_\_\_

31. From question #22, identify the probability that I pull out a C exam, then an F (with replacement). Show your work for full credit. Reduce.

#31 answer: \_\_\_\_\_

32. You have 3 pairs of red socks, 2 pairs of green socks, and 7 pairs of white socks. Identify the probability of pulling out one red pair and then pulling out one white pair without replacement. Show your work for full credit. Reduce.

#32 answer: \_\_\_\_\_

33. In 3 card poker, a three of a kind will win you a lot of money! Identify the probability that you are dealt 3 Aces in a hand. Show your work for full credit. Reduce.

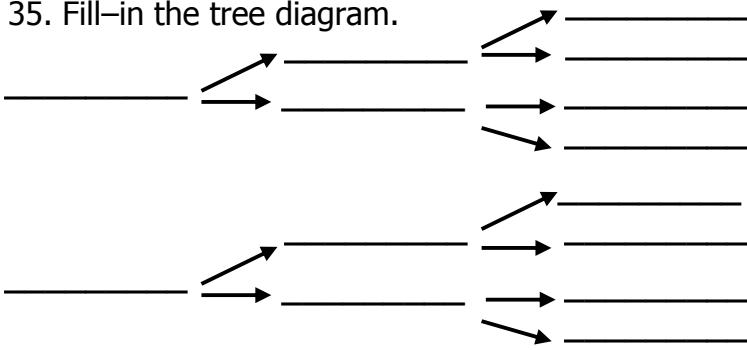
#33 answer: \_\_\_\_\_

34. From question #22, identify the probability that I pull out a C exam, then an F, then another C exam without replacement. Show your work for full credit. Reduce.

#34 answer: \_\_\_\_\_

For 35 & 36, use the following information. I flip a coin 3 times.

35. Fill-in the tree diagram.

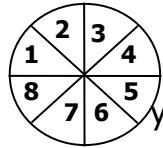


35. Identify the probability of flipping all tails.

#35 answer: \_\_\_\_\_

36. Identify the probability of flipping 2 tails and 1 heads (Use your tree diagram!).

#36 answer: \_\_\_\_\_

37. I spin this spinner  , then roll a die. Identify the probability that the sum of the numbers is 5. Show your work for full credit. Reduce.

#37 answer: \_\_\_\_\_