

Name: _____

Unit 5

Solve the problem or fill in the blank to complete the crossword below. If you come up with a numerical answer you should write it out as a word.

The crossword puzzle grid consists of 16 numbered starting points for words:

- 1: Vertical word, 10 cells.
- 2: Horizontal word, 10 cells.
- 3: Vertical word, 10 cells.
- 4: Vertical word, 10 cells.
- 5: Horizontal word, 5 cells.
- 6: Vertical word, 6 cells.
- 7: Vertical word, 6 cells.
- 8: Vertical word, 6 cells.
- 9: Vertical word, 4 cells.
- 10: Horizontal word, 10 cells.
- 11: Vertical word, 10 cells.
- 12: Horizontal word, 2 cells.
- 13: Vertical word, 4 cells.
- 14: Horizontal word, 3 cells.
- 15: Horizontal word, 15 cells.
- 16: Horizontal word, 10 cells.

Across

- 2.** When Finding the probability of a dart hitting a bull's-eye without using recorded statistics, what type of probability are you finding?
- 5.** The prom committee has 4 sites available for the banquet and 3 sites available for the dance. How many arrangements of 1 banquet site and 1 dance site are possible?
- 10.** If $P(A \text{ or } B) = P(A) + P(B)$ then A and B are _____ events.
- 14.** 8P1
- 15.** A _____ is a frequency table that contains data from two different categories.
- 16.** If $P(A \text{ and } B) = P(A) \times P(B)$ then A and B are _____ events.

Down

- 1.** A _____ can be used to assign probabilities to outcomes of a chance process.
- 3.** A class tossed coins and recorded 161 heads and 179 tails. What type of probability can be founding using this information?
- 4.** What describes the method of using multiplication to count?
- 6.** $n!/(n-r)!$ is the formula for _____.
- 7.** $n!/r!(n-r)!$ is the formula for _____.
- 8.** Would you solve using a permutation or combination? A class of 25 is electing students for the roles of president, vice president and secretary.
- 9.** Dependent or Independent: A month is selected at random; a day of that month is selected at random
- 11.** Number of Times the Event Occurs/ Number of Trials is the formula for _____ Probability
- 12.** 5C2
- 13.** _____ diagrams can help you find conditional probability.

Unit 5 Extra Practice:

1. What is the experimental probability a quarterback will complete his next pass if he has completed 30 of his last 40 passes?
2. C and D are mutually exclusive events. Find $P(C \text{ or } D)$ when $P(C)=2/5$ and $P(D)=3/5$.
3. Twelve students enter a talent show. Awards are given for first place through fifth place. In how many ways can the students finish first through fifth?
4. Constructed a tree diagram that shows a class of 55% males, 34% of which are at least 68 in. tall and 45% females, 12% of which are at least 68 in. tall.
5. What is the experimental probability a basketball player will make his next free throw if he has made 36 of his last 45 free throws?
6. For summer reading, you are asked to read 2 books from a list of 6 books. How many different pairs of books can you choose to read?
7. Events A and B are independent. Find $P(A \text{ and } B)$ when $P(A)=1/6$ and $P(B)=2/5$.
8. There are 25 students in a math class. The teacher wants to choose 4 students at random to come to the board and work on math problems. She writes each student's name on 1 piece of paper, places them in a hat and chooses 4 without looking. Is this fair? Why or why not?

Unit 5 Answer Key:

Crossword:

1. Probability Model
2. Theoretical
3. Experimental
4. Fundamental Counting Principle
5. Twelve
6. Permutation
7. Combination
8. Permutation
9. Dependent
10. Mutually Exclusive
11. Experimental
12. Ten
13. Tree
14. Eight
15. Contingency Table
16. Independent

Extra Practice:

1. 75%
2. $\frac{1}{6}$
3. 95,040 ways

5. 80%

6. 15 different pairs

7. $1/15$

8. Yes, because each student is equally likely to be chosen.

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1 P
R
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2 T H E O R E T I C A L

3 T W E L V E

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5 T W E L V E

6 P
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7 C
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16 I
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