

Name _____ Class _____ Date _____

Unit Test: Probability
Calculator: Permitted

Find the value of each expression.

1. ${}_7P_3$

2. ${}_6C_4$

3. There are 20 books on the summer reading list. In how many different ways can you choose one per week for six weeks?
4. There are 15 members of the show choir. In how many different ways can you arrange any 8 members in the front row?
5. You have 3 types of bread, 4 types of meat and 5 different snacks. How many lunch combinations are possible?
6. You roll a number cube. What is the probability that you will roll a number less than 3?
7. The probability that a spinner will land on a blue section is $\frac{1}{4}$.
What is the probability that the spinner will not land on a blue section?
8. You draw names from a bin containing the names of 18 freshman and 20 sophomores. What is the probability that you will draw the name of a sophomore?

9. What are the odds in favor of drawing a green jolly rancher out of a bag with 3 purple, 10 red, 6 green and 2 blue?

10. Your computer password has to be 5 characters. You can have 2 letters followed by 3 digits. How many different passwords can be created?

You spin a spinner that has 8 equal-sized sections numbered 1 to 8. Find each probability.

11. $P(1 \text{ or } 2)$

12. $P(\text{even or odd})$

13. $P(\text{odd or } 2)$

14. $P(\text{perfect square or odd})$

You choose a marble at random from a bag containing 8 brown marbles, 6 yellow marbles, and 1 purple marble. You replace the marble and then choose again. Find each probability.

15. $P(\text{both yellow})$

16. $P(\text{both purple})$

17. $P(\text{brown then purple})$

18. $P(\text{yellow then brown})$