

# Algebra 2B

## Practice Quiz on 11-1 & 11-2

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Hr: \_\_\_\_\_

### SHOW ALL WORK

1. The prom committee has four sites available for the banquet and three sites for the dance. How many arrangements are possible for the banquet?

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

2. In 2004, Maryland license plates had 3 letters followed by 3 digits. How many possible license plates were possible?

2. \_\_\_\_\_

For #3-6, evaluate each expression.

3.  $9!$

3. \_\_\_\_\_

4.  $5! 2!$

4. \_\_\_\_\_

5.  $5(2!)$

5. \_\_\_\_\_

6.  $\frac{10!}{7!3!}$

6. \_\_\_\_\_

7. In how many ways can you arrange 8 shirts on hangers in a closet?

7. \_\_\_\_\_

For #8-9, evaluate each expression.

8.  ${}_8P_2$

8. \_\_\_\_\_

9.  ${}_3P_2$

9. \_\_\_\_\_

10. Fifteen runners are in a race. First, second, and third places will win medals. In how many ways can 15 runners finish first, second, and third (no ties allowed)?

10. \_\_\_\_\_

**For #11-16, evaluate each expression.**

11.  ${}_7C_4$

11. \_\_\_\_\_

12.  $4({}_6C_3)$

12. \_\_\_\_\_

13.  ${}_8C_2 + {}_5C_4$

13. \_\_\_\_\_

14.  $\frac{{}_5C_2}{{}_7C_2}$

14. \_\_\_\_\_

15. Your biology teacher chooses 6 students from a class of 26 to do a special project. How many different groups can your teacher form?

15. \_\_\_\_\_

For #16-17, a.) determine whether you should use a permutation or combination. b.) Then solve the problem.

16. A chemistry teacher divides his class into eight groups. Each group submits one drawing of the molecular structure of water. He will select four of the drawings to display. In how many ways can he select the drawings?

16. a.) \_\_\_\_\_

b.) \_\_\_\_\_

17. You will draw winners from a total of 25 tickets in a raffle. The first ticket wins \$100. The second ticket wins \$50. The third ticket wins \$10. In how many different ways can you draw the three winning tickets?

17. a.) \_\_\_\_\_

b.) \_\_\_\_\_

18. You got an A on 7 of your last 20 quizzes. What is the experimental probability that you will get an A on your next quiz?

18. \_\_\_\_\_

For #19-21, in a telephone survey of 150 households, 75 answered "yes" to a particular question, 50 answered "no" and 25 were "not sure". Find each experimental probability.

19. P(yes)

19. \_\_\_\_\_

20. P(not not yes)

20. \_\_\_\_\_

21. P(yes or no)

21. \_\_\_\_\_

22. A rectangular landing pad measures 20' x 25' with a rectangular target on the pad measuring 6' x 8'. What is the geometric probability that a model rocket falling randomly on the pad will land in the target?

22. \_\_\_\_\_