Chapter 4 Practice Test 1

Name _____

In 1-3, find the slope, distance, and midpoint between the two given points.

1. (3, 4) and (6, 10)

   Slope = _____ Distance = _____ Midpoint = _____

2. (1, -5) and (-1, -3)

   Slope = _____ Distance = _____ Midpoint = _____

3. (3, n) and (9, n + 6)

   Slope = _____ Distance = _____ Midpoint = _____

_____ 4. Find the equation of the line, in slope intercept form, that goes through the point (-3, 1) and has a slope of -5.

_____ 5. Find the equation of the line, in slope intercept form, that goes through the point (-4,4) and has a slope of ½ .

_____ 6. Find the equation of the line, in slope intercept form, that goes through the point (2, 7) and (3, 10)

_____ 7. Find the equation of the line, in slope intercept form, that goes through the point (2, -9) and (3, -10).

_____ 8. Give the equation of the line in standard form that is parallel to $y = 3x - 5$ and passes through the point (1, 1).

_____ 9. Give the equation of the line in standard form that is parallel to $6x + 3y = 9$ and passes through the point (-1, 2).

_____ 10. Give the equation of the line in standard form that is perpendicular to $y = -2x - 5$ and passes through the point (-2, 1).

_____ 11. Give the equation of the line in standard form that is perpendicular to $3x - 6y = 2$ and passes through the point (1, 3).

Calculate the following.

_____ 12. $\sum_{n=0}^{3} 5^n$ _____ 13. $\sum_{n=1}^{4} (2n-10)$ _____ 14. $\sum_{n=-2}^{2} n^n$

_____ 15. $\frac{6!}{2!4!}$ _____ 16. $\frac{10!}{2!8!}$ _____ 17. $\frac{106!}{105!}$

_____ 18. I have 5 shirts and 3 pairs of shorts. How many different outfits can I make assuming they all match since I would never go out in public looking poorly dressed?

_____ 19. When dressing a model, I have to put the following items on it: shirt, socks, shoes, pants, and sunglasses. If I have 3 shirts, 4 pairs of socks, 2 shoes, 3 pants, and 3 types of sunglasses, how many different looks can I create for this model?

_____ 20. From 12 toppings, how many different pizzas can I make that have 2 toppings or less? Think on this one.

_____ 21. If there are 10 people in my class and I want to give 4 of them a bonus project, how many different groups could I have do the project?

_____ 22. If there are 8 kids on my little league basketball team, how many different sets of 5 kids could I start? I am not concerned about position on the court.

_____ 23. When I took my wife out to eat on our 10^{th} Wedding Anniversary, I took her to a top notch restaurant called "Elizabeth's on 37^{th}." On the menu, we had a choice of 6 main entrees, 8 side dishes, 5 desserts, and 4 different types of beverages. How many different types of meals could I have had that evening assuming that you only received one main entrée, one side dish, 1 dessert and 1 beverage. For $150, you would think I could have gotten more food, wouldn't you?

_____ 24. Out of 110 Seniors, I have to pick a President, Vice-President, and Secretary. How many different ways could I form the Senior Cabinet?

_____ 25. For my parent's 50^{th} Wedding Anniversary, I want to have a big party. Shhh, don't tell them. From the caterers 14 different desserts, I can choose 3. How many different options do I have?