Name_____

Geometry Summer Assignment

1. Evaluate $a + b$ for $a = 12$ and $b = 6$. 1._____

2. Add $\frac{2}{3} + \frac{4}{5}$. 2._____

3. One morning, the elevator in Emilio's apartment building was out of order. When he walked down the stairs from his apartment to the ground floor, he counted 252 steps. Emilio lives on the 14th floor. How many steps are between each floor?

   3_____

4. Which is NOT an integer? 4._____

   F -11 H $\frac{1}{2}$

   G 0 J 14

5. Find $\sqrt{100}$. 5._____

6. Simplify $\frac{56 \div 7 \bullet 2}{4^2}$. 6._____

7. Solve $-25 = x + 18$. 7._____

8. Solve $-3x = -12$. 8._____

9. Ms. Guzman started a 950-mile trip with a full tank of gas. Her 12-gallon tank was almost empty after 450 miles. About how many miles per gallon does Ms. Guzman's car get?

   9._____

10. Mandy's school has 1300 girls. The ratio of boys to girls is 17 : 20. How many boys attend Mandy's school?

    10._____

11. Twenty percent of what number is 32? 11._____

12. What is the next number in the sequence? 4, 12, 36, 108, . . . 12._____

13. The old containers of laundry detergent hold 50 ounces. The new containers hold 20% more than the old containers. How many ounces do the new containers hold?

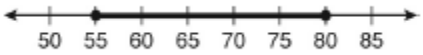
13._____

14. It is recommended that people brush their teeth for at least 2 minutes. Write an inequality that represents this situation?

14._____

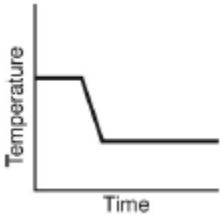
15. Solve $3x + 16 > 34$. 15._____

16. Which situation matches the graph below? 16._____



F The medicine should be kept at a temperature greater than or equal to 558.
G The medicine should be kept at a temperature less than or equal to 808.
H The medicine should be kept at a temperature between 558 and 808 inclusive.
J The medicine should be kept at a temperature below 558 or above 808.

17. Which situation could the graph below represent? 17._____



A In the morning, the temperature was steady. Then it dropped quickly before leveling off again.
B The temperature rose slowly throughout the day and then fell quickly.
C The temperature rose quickly, remained steady, and then dropped slowly.
D The temperature rose and fell several times throughout the day.

18. Multiply: $x^2(x^2 - 2x + 4)$ 18._____

19. Multiply: $(2x-6)(x^2+4x-2)$ 19._____

20. Which ordered pair is on the graph of $y=4x+3$? 20._____

F (1, 4) H (4, 1)

G (1, 7) J (7, 1)

21. Solve: $15+10x>-4x+3$ 21._____

22. Multiply: $(4x-3)(x-4)$ 22._____

23. What is the y-intercept of $6x-4y=12$? 23._____

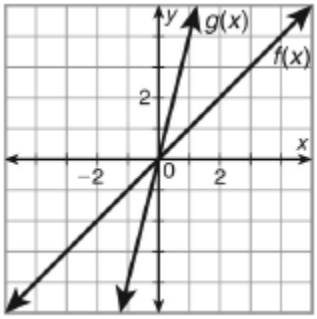
24. Find the slope of the line that contains (5, 8) and (10, 12). 24._____

25. Which function has a y-intercept of 5? 25._____

F $y=-5x+1$ H $y=5x+1$

G $5y=x+1$ J $y-5=x$

26. The graphs of $f(x)$ and $g(x)$ are shown below. Which describes the transformation from $f(x)$ to $g(x)$?



26._____

A translation up

B translation down

C rotation

D reflection

27. Which ordered pair is a solution of the system $\begin{cases} x + 2y = 7 \\ y = x + 2 \end{cases}$? 27._____

F (0, 2)
G (1, 3)
H (2, 4)
J (5, 1)

28. Solve the system $\begin{cases} x + y = 3 \\ 2x - y = -9 \end{cases}$ 28._____

29. Which ordered pair is a solution of $y > 3x - 8$? 29._____

F (1, –7)
G (1, –5)
H (4, 4)
J (4, 7)

30. Solve: $x - (15x - 6) = 104$ 30._____

31. Simplify $y^6 \bullet y^2$. 31._____

32. Simplify $\frac{3^5}{3^3}$. 32._____

33. Factor completely: $6x^2 - 23x + 20$ 33._____

34. Multiply $(d + 7)(d - 3)$. 34._____

35. Write the prime factorization of 150? 35._____

36. Simplify $\sqrt{40}$. 36._____

37. The area of a square is $9x^2 - 6x + 1$. Which is an equivalent expression for the area of the square? 37._____

F $(3x - 1)^2$
G $(3x + 1)^2$
H $(3x - 2x + 1)^2$
J $(3x + 2x + 1)^2$

38. Which is a quadratic function? 38._____

A $y = 2x + 16$

B $y = x^2 - 4x + 3$

C $y = \sqrt{x - 1}$

D $y = 4x$

39. Solve $x^2 = 196$. 39._____

40. Factor completely: $6x^4 + 12x^2$ 40._____

41. Factor: $x^2 - 8x - 20$

41._____

42. Solve by factoring: $2x^2 + 13x + 15 = 0$ 42. _____

43. The area of a rectangle is 112. The length is 7, and the width is $\sqrt{x}$. What is the value of *x*? What is the width of the rectangle? (Hint: The area of a rectangle is equal to length times width.)

43. _____