

Geometry Summer Assignment

The purpose of this summer assignment is to review and strengthen mathematical skills essential for success in Geometry. The assignment consists of math concepts taught in previous courses you have taken.

TUTORIAL HELP SITES: if you have difficulty, the following websites provide tutorials and videos to assist as

you review:

<https://www.khanacademy.org/>

<http://www.purplemath.com/>

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

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

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?

4. Give an example of a real number that is not an integer:

5. Find $\sqrt{100}$

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

7. Solve $-25 = x + 18$

8. Solve $-3x = -12$

9. Mrs. 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 Mrs. Guzman's car get?

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

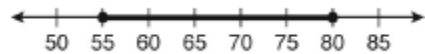
11. Twenty percent of what number is 32?

12. 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?

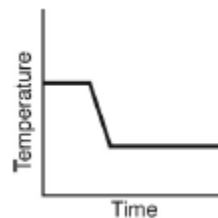
13. Write an inequality that describes the following situation: It is recommended that people brush their teeth for at least 2 minutes.

14. Solve $3x + 16 > 34$

15. Write a situation described by the following graph:

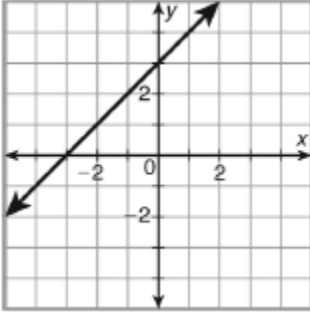


16. Write a situation described by the following graph:



17. Write an ordered pair that is on the graph of $y = 4x + 3$.

18. Which function is shown on the graph below:



19. Find the common difference in the sequence: 68, 61, 54, 47, 40...

20. What is the y-intercept of $6x - 4y = 12$

21. Which slope is the steepest:

$$-12, \frac{9}{10}, -\frac{1}{15} \text{ or } 2$$

22. Find the slope of the line between (5, 8) and (10, 12)

23. Write a linear equation with a slope of 2 and a y-intercept of -5.

24. Solve the system $\begin{cases} x + 2y = 7 \\ y = x + 2 \end{cases}$

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

26. Write one ordered pair that is a solution for $y > 3x - 8$

27. Simplify $y^6 \cdot y^2$

28. Simplify $\frac{3^5}{3^3}$

29. Multiply $(d + 7)(d - 3)$

30. What is the prime factorization of 150?

31. What is the complete factorization of $6x^4 + 12x^2$?

32. The area of a square is $9x^2 - 6x + 1$. What is the length of one of the sides?

33. Solve $x^2 = 196$

34. How many ways can 4 people sit at a table with 6 seats?

35. The number of room vacancies for one week at one motel is given below.

S	M	T	W	T	F	S
12	10	10	5	4	0	1

What is the mean number of vacancies?

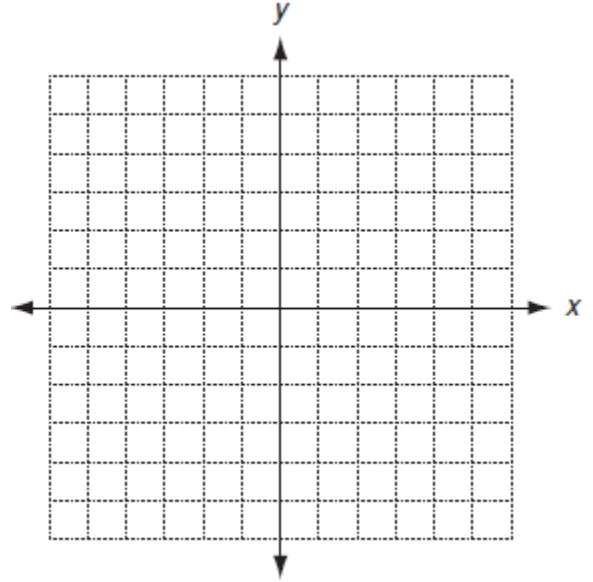
36. What is the next number in the sequence 4, 12, 36, 108, ...

37. A trading card increases in value by 2% each year. In 2005, it was worth \$8. About how much is it worth in 2011?

38. Simplify $\sqrt{40}$

39. Simplify $\frac{d^2-16}{d+4}$

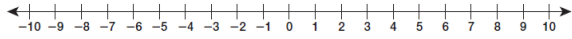
40. Graph the following 4 points: A(1, 3), B(-3, -1), C(-3, 1), D(2, -4)



41. Write an expression that represents the sum of a number and 11

42. Angelica has 15 comic books and each month she buys three more comic books. Write an equation representing the number of comic books c she has at the end of any month m

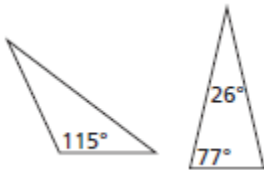
43. Solve and graph $-4k + 5 < 9$



44. Solve the proportion $\frac{3}{4} = \frac{h}{36}$

45. Solve the proportion $\frac{3}{5} = \frac{x+4}{2x-3}$

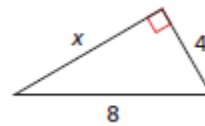
46. Classify the two triangles:



47. Simplify $\sqrt{2}\sqrt{32}$

48. Round 9.028 to the nearest tenth and the nearest hundredth.

49. Find x in the right triangle below (if x is not a whole number, leave in simplest radical form):



50. Find the area and perimeter of a rectangle with side lengths of 4.5 in and 2 in.