

Name: _____

Geometry Honors Summer Review Packet

- **Due at the start of your first Geometry Honors class**
- **Quiz on these topics during the first weeks**
- **Show all work**
- **No calculator allowed**

Evaluate the expression for the given values of the variables.

1. $\frac{16.8}{x}$ when $x = 2$

2. $|6 - x| + 4$ when $x = 5$

Evaluate.

3. $4 [44 \div (10 - 8^2)] + 7$

Check whether the given number is a solution of the equation or inequality.

4. $10x - 4 \leq 20$; 5

Tell whether the pairing is a function.

5.

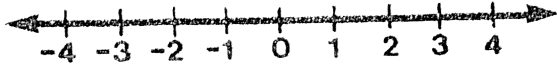
Input	Output
5	10
10	15
10	20
20	25

Write an equation or inequality to model the situation.

6. Four hundred dollars is less than or equal to the product of \$32 and the number p of passes to an amusement park.

Graph the numbers on a number line.

7. -0.6 and 2.1



Write the numbers in increasing order.

8. $2\frac{1}{3}$, $-\sqrt{8}$, $-\sqrt{11}$, 4, -3

Simplify.

9. $3y - (6y + 2)(-y)$

10. $\frac{x}{4} \div \frac{6}{x}$

11. $3\sqrt{5} + 4\sqrt{5}$

12. $\sqrt{5} \cdot \sqrt{20}$

Solve the equation

13. $\frac{3}{x+2} = \frac{9}{4x-1}$

14. $\frac{2}{3}y = -48$

15. Volume of a Cone: $V = \frac{\pi r^2 h}{3}$

Solve for h .

16. Temperature Conversion: $F = \frac{9}{5}C + 32$

Solve for C .

17. $\sqrt{x} - 2 = 0$

18. $|x + 3| = 4$

Rewrite the equation so that y is a function of x .

19. $\frac{2}{3}y + 4 = 2x$

Decide whether the given ordered pair is a solution of the equation.

20. $\frac{1}{2}x + 4 = 10y; \left(2, \frac{1}{2}\right)$

Find the x -intercept.

21. $3y - 10x = 4$

Find the y -intercept.

22. $7 - 12x = 3y$

Find the slope of the line passing through the points.

23. $(-10, -7), (1, -2)$

Decide whether the graphs of the two functions are parallel lines.

24. $f(x) = 3x + 2, f(x) = \frac{1}{3}x + 4$

Write an equation of the line in slope-intercept form.

25. The slope is -3 ; the y -intercept is 5 .

Write an equation of the line that passes through the point and has the given slope. Write the equation in slope-intercept form.

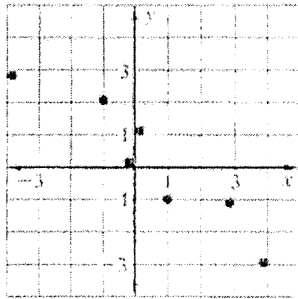
26. $(3, 2), m = \frac{1}{2}$

Write an equation in slope-intercept form of the line that passes through the points.

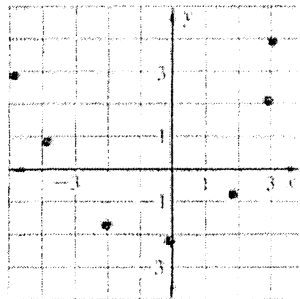
27. $(-5, 3), (4, -5)$

State whether x and y have a positive correlation, a negative correlation, or relatively no correlation.

28.



29.

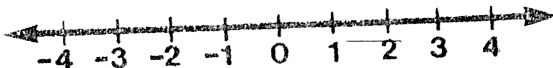


Is the ordered pair a solution of the inequality?

30. $3x + 2y \leq 4$; $(4,3)$

Solve the inequality and graph the solution.

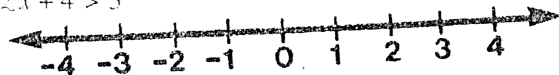
31. $-3 \leq 2x + 5 < 11$



32. The biology club budgeted \$200 for their pancake breakfast. Each meal costs \$1.50 to prepare. Write an inequality that represents the number of meals that can be prepared without going over the budget.

Graph the inequality.

33. $-2x + 4 > 5$



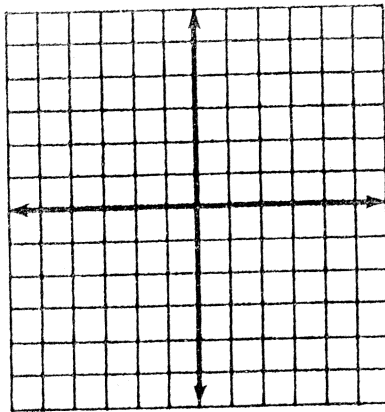
Is the ordered pair a solution of the system of linear equations?

34. $(4,1)$ $-x + y = -3$
 $x + 3y = 6$

38. Graph and check to solve the linear system.

35. $-2x + y = 1$

$2x + 3y = 11$



Use the substitution method to solve the linear system.

36. $x + y = 4$

$-5x + 2y = 6$

Simplify the expression.

37. $2^7 \cdot 2^9$

38. $(x^5)^6$

39. $3x^2 \cdot (4x^3)^2$

Find the sum or difference.

40. $(2x^2 + 3x + 5) + (-x^2 + 4x - 7)$

Find the Product.

41. $(x - 4)(x - 5)$

Use the zero-product property to solve the equation.

42. $(x + 5)(x - 1) = 0$

Factor the Expression.

43. $x^2 + 11x + 30$

44. $x^2 - 16$

Sketch the graph of the function. Label the vertex.

45. $y = 3x^2$

Solve the equation by finding square roots.

46. $x^2 = 49$

Use the quadratic formula to solve the equation.

47. $0 = x^2 + x - 20$

Decide how many solutions the equation has.

48. $x^2 - 2x + 1 = 0$

*Have a great summer -
see you in the fall!*

