

Name _____

Algebra I 1st Semester Practice Final

1. Evaluate $5 + 12 \div 3 - 6$

2. Evaluate $5(4 + 2 \cdot 7) \div (3 \cdot 13 - 9)$

3. Write an algebraic expression for 9 less than y.

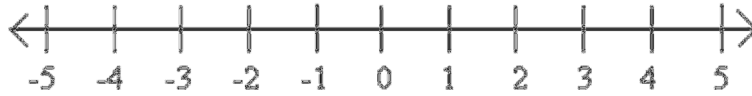
4. Write an algebraic expression for the sum of the square of a number and 7.

5. Evaluate $8xy - y^2$ if $x = \frac{1}{2}$ and $y = 3$

6. Write the simplest form of $7y + 8 - 2y$

7. Write the simplest form of $10x^2 + 7x + 3x^2 - 9x$

8. On the number line graph all integers less than 4



9. Write $5 \bullet 5 \bullet 5 \bullet x \bullet x \bullet y \bullet y \bullet y$ using exponents

10. Subtract $-5 - (-12)$

11. What is the solution of $7 + x = -21$

12. What is the solution of $7 - x = -30$

13. What is the value of $-212 + 310$?

14. What is the value of $-28 + |-21|$?

15. Find the value of $-|x + 9|$ if $x = -15$

16. Let x represent the increase in attendance at the Snowflake Classic this year. If last year the total attendance at the Snowflake Classic was 482 and this year the total attendance was 635, write an equation to show the increase in attendance and solve.

17. The sum of two integers is -20, The greater is 8. What is the lesser integer?

18. Evaluate $4(-5) + (-6)(-2)$

19. Simplify $8x - 4x^2 - 2x$

20. Simplify $\frac{42x - 21}{-7}$

21. Simplify $\frac{-5}{\frac{3}{7}}$

22. What is the solution of $\frac{2x - 7}{3} = -5$

23. What is the solution of $\frac{-5}{7}x = -25$

24. What is the solution of $-2(y - 7) = 6(2y + 1)$

25. What is the solution of $x - \frac{2}{3} = \frac{3}{4}x$

26. What is the solution of $2(3x - 5) - x + 5 = 5(x - 1)$

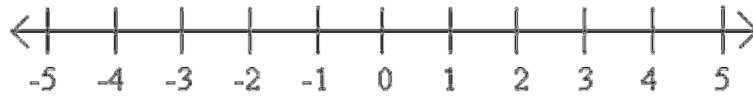
27. What is the solution of $12 - 4x = -28$

28. 25 is 20% of what number?

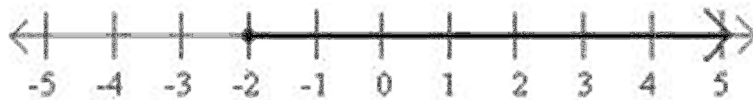
29. Solve the proportion $\frac{5}{3} = \frac{x+1}{x-1}$

30. Jim traveled 72 miles in 2 hours. At the same rate, find the number of hours it will take him to travel 162 miles?

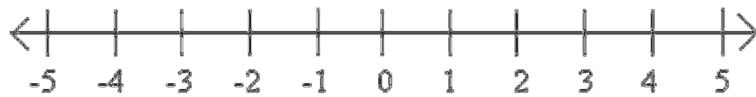
31. Solve and graph $n - 8 < -7$



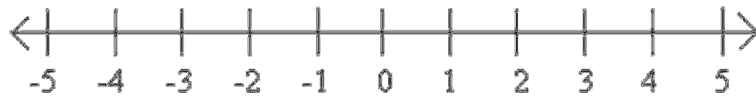
32. Write the inequality for the graph below.



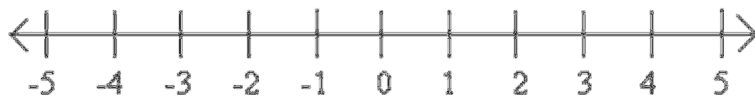
33. Solve and graph $3d - 2(8d - 9) \geq 3 - (2d + 7)$



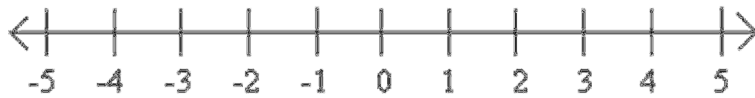
34. Solve and graph $-7x + 21 < 49$



35. Graph the compound inequality $x < 1$ or $x > 4$.



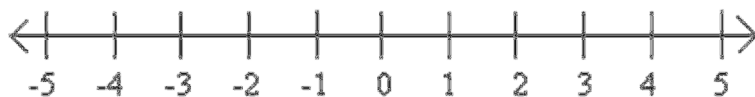
36. Solve and graph the compound inequality $-5 \leq 2x + 3 \leq 7$



37. Solve and graph the absolute value inequality $|6x - 12| \leq 18$



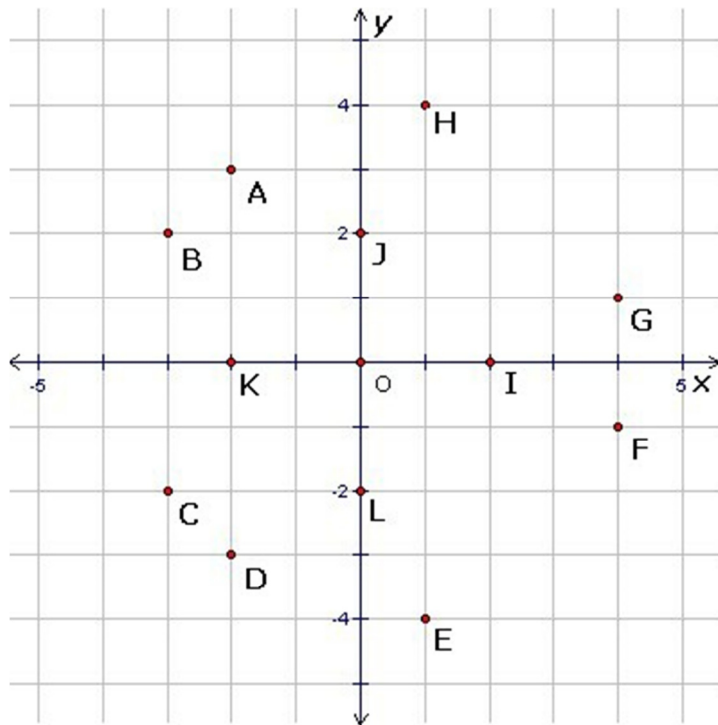
38. Solve and graph the absolute value inequality $|x - 3| \geq 2$



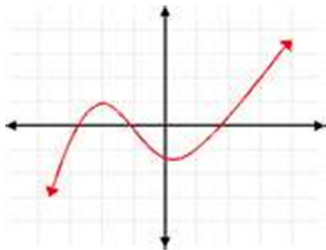
39. Find the solution of $7 - 4(2x - 3) = 6x - 15$

40. The y-coordinate of each point on the x-axis is _____?

41. What is the ordered pair for point H

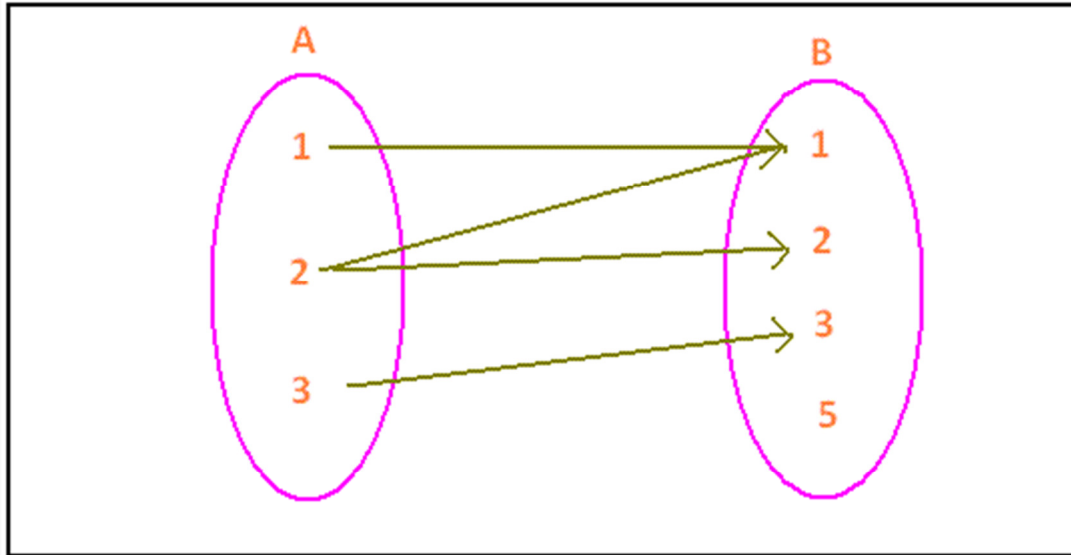


42. Is the graph below a function?



43. Solve $3x - 4y = 24$ for y.

44. Is the relation below a function?



45. If $g(x) = 5x^2 - 3x + 8$ what is the value of $g(-3)$?

46. Find the solution of the equation $3m + n = 12$ if the domain is $\{-2, 0, 4\}$

47. What is the slope of the line passing through $(5, -1)$, $(8, 2)$?

48. Find the value of r so that the line through $(4, -5)$, $(3, r)$ has a slope of 8.

49. What is the slope of $6x+7y=14$?

50. Graph $x - 3y = 12$

