

Algebra A-B
Review for Final Exam

Name _____

1. James answered 16 out of 24 questions correctly on his Algebra test. What percent is this?
2. Margie got 32% of the votes in the election for class president. If 144 people voted for Margie, how many people voted in the election ?
3. Last year the freshman class was 420 students. This year's freshman class is 483 students. What percent increase does this represent?
4. A car averages 36 miles per gallon of gas in highway driving. At this rate, how many miles would you expect to drive in this car if you have 15 gallons of gas in your gas tank.
5. What are the next three numbers in the pattern: 1, 1, 2, 3, 5, 8, 13, ?
6. Find: $\frac{-3(10-5)+3}{6^2-3 \cdot 5}$
7. If $x = 3$, $y = 2$ and $z = -2$, find the value of $3y(2x^2 + 3z)$
8. Simplify the expression: $2x + 3xy^2 - 7xy^2 + 9x - xy^2 + 3x$
9. Use the distributive property to multiply $5(2a + 3c)$
10. Identify the property that is used for each of the following statements:
 - a) $4(5x) = (4 \cdot 5)x$ _____
 - b) $(6m)(n) = (n)(6m)$ _____
 - c) $k + (-k) = 0$ _____
 - d) $A + 0 = A$ _____
11. Find the sum of $(-5.78) + (4.2)$
12. Find the sum of $(-4\frac{1}{2}) - (3\frac{3}{8})$
13. Simplify: $\sqrt{\frac{18}{50}}$

14. If $y = -4$, what is the value of $2y^2 + 3y - 1$?

15. Simplify: $\frac{9xy - 15x}{3x}$

16. What is the algebraic expression for: Twice the square of a number increased by 5 ?

17. Peter and Paul collect CD's. Peter has two more than three times the number of CD's that Paul has. If Peter has 35 CD's, write the equation that can be used to find the number of CD's in Paul's collection.

18. Each night Jim puts his change in a jar at home. When he counted the change, he had 44 coins. He had twice as many dimes as nickels, and 8 fewer nickels than quarters. How much money did he have?

19. Solve for x: $3x + 4 = 28$

20. Solve for x: $\frac{3}{4}x = 45$

21. Solve for x: $18 - 5x = -12$

22. Solve for w: $3w - 13 = 12 - 2w$

23. Solve for x: $3(2 + x) = -4(x - 5)$

24. Solve for x: $(2x + 9) + (5x - 4) = 3(2x + 3)$

25. What is the solution of $\frac{3t - 2}{3} = \frac{2t + 12}{6}$?

26. Solve for x : $\frac{5}{6}(12x - 6) - 4(3x - 1) = 0$

27. The daily high temperatures in Long Beach during a week last April were 63° , 68° , 74° , 83° , 87° , 85° , and 88° . What was the mean temperature for the week, rounded to the nearest whole number?

28. In $\triangle ABC$, if the measure of the angles are $m\angle A = x^\circ$, $m\angle B = 4x + 15^\circ$ and $m\angle C = 3x + 25^\circ$, what is the actual measure of $\angle C$?

29. The probability that Kevin will make the football team is $\frac{5}{12}$.
What is the probability that he will not make the team?

30. Find the value of $-\left| \frac{(-18) + (-2)}{7 + (-2)} \right|$

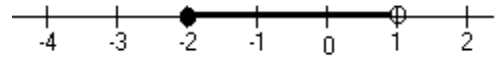
31. If $3a + 4y = c$, what is the value of y in terms of a and c ?

32. Solve the inequality: $3x - 2 < 10$.

33. Solve the inequality: $3 - 2x < x + 5$

34. Solve the inequality: $7x + 6 < -2x + 24$

35. Which compound inequality is represented by the given graph:



36. On a coordinate system, in what quadrant is the point $(-3, 7)$ located?

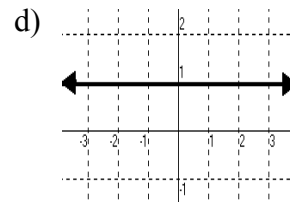
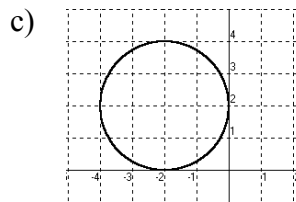
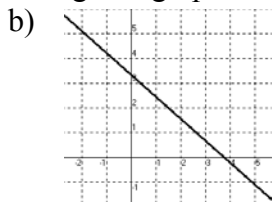
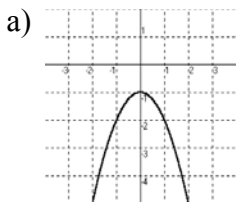
37. What is the midpoint of the segment between $(-2, 8)$ and $(12, -6)$

38. What are the coordinates of a point on the line determined by $y = -\frac{2}{5}x + 2$ if $x = -10$?

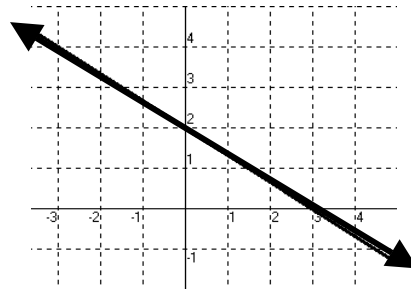
39. List the range of $f(x) = 5x + 2$ if the domain $D = \{0, 2, 4\}$

40. Given $g(x) = x^2 - 4$, find the value of $g(3)$.

41. Determine which of the given graphs is a function.

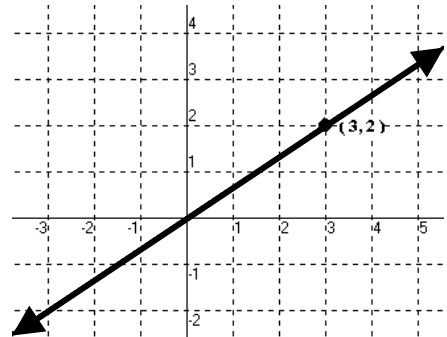


42. Determine the slope of the line on the given graph:



43. Find the slope of the line which passes through points $(-3, -4)$ and $(5, 12)$.

44. What is the equation of the given line on the graph that contains the point $(3, 2)$?

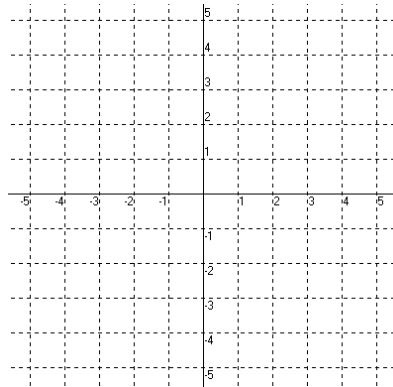


45. For the function $h(x) = 3x - 7$, what is the value of $h(-3)$?

46. What is the equation of the line that passes through the points $(3, -5)$ and $(5, -3)$?

47. Write the equation of the line parallel to the line determined by $y = 2x + 9$ with a y-intercept at -1 .

48. Draw the graph of the function: $y = -2x - 1$



48. Describe the direction of a line that has a slope equal to zero.

49. Write the equation of the line determined by $2x - y = 12$ in its slope-intercept form.

50. Write the standard equation for the line determined by the equation $y = \frac{3}{4}x + 5$