

Algebra 1

Chapter 5A Test Review

Solve each system by *elimination*.

1. $-3x + 3y = 18$
 $5x - 3y = -26$

2. $x - 9y = -9$
 $-3x + 27y = 27$

3. $4x - 6y = -18$
 $x - 3y = 0$

4. $-x + 6y = -12$
 $4x - 2y = -18$

5. $-4x + 2y = 18$
 $-8x + 4y = 15$

6. $-5x - 8y = -2$
 $-x + y = -3$

Solve each system by *substitution*.

7. $6x - y = 6$
 $3x + 4y = 3$

8. $2x - 2y = 8$
 $-2x + y = -10$

9. $9x - 6y = -27$
 $-10x - 5y = 30$

Solve each system by *graphing*.

10. $y = \frac{1}{2}x + 6$
 $y = \frac{11}{2}x - 4$

11. $-2y = x + 14$
 $-3x - 2y = 18$

12. Sketch a residual plot that represents a good best fit line.

13. Sketch a residual plot that represents a bad best fit line.

14. For the given data find the mean, median and mode: $\{2, 7, 5, 4, 3, 7, 2, 9, 6\}$

15. Given $y = \frac{2}{5}x - 7$ find the equation of a parallel line going through $(-10, 6)$

Write the variables and a system of equations for #16-20 then **pick 3 of the 5 problems to solve using any method.**

16. A department store is having a sale on women's shoes. The store prices sandals at \$20 a pair and wedges at \$25 a pair. At the end of the day total receipts showed 55 pairs of shoes were sold for a sum of \$1250. How many sandals and how many wedges were sold?

17. A train leaves Portland for Seattle going 60 mph. At the same time, another train leaves Seattle for Portland traveling 80 mph. If the cities are approximately 175 miles apart, where and when will the two trains pass each other? (Hint: Use time-distance equations. Be sure to define your distance as either *from* Seattle or *from* Portland.)

18. All 231 students in the Math Club went on a field trip. Some students rode in vans which hold 7 students each and some students rode in buses which hold 25 students each. How many of each type of vehicle did they use if there were 15 vehicles total and all were completely filled?

19. Ed spent \$3.40 for 22 stamps. If he bought only \$0.25 and \$0.10 stamps, how many of each type did he buy?

20. A store sells pinto beans for \$4.40/lb and kidney beans for \$1.20/lb. How many pounds of each type of bean can you buy to get exactly 3 lbs of beans for \$6?

21. Rewrite $2x - 4y = 18$ in slope intercept form

22. Graph $y = 2 - \frac{1}{2}x$ and find the x & y intercepts

23. Draw an example of what a no solution system of equations would look like.

24. Draw an example of what an infinite solution system of equations would look like.

25. Given $y = 2x - 5$
 $3x - 4y = 10$ is (3,1) a solution?