

Algebra 2  
Test 5 Review  
Systems of Equations

Fill in the blanks in this chart:

Type of Linear System:	Number of solutions:	What the graphed lines look like:
Consistent and Independent		
Inconsistent		
Dependent		

Find the intersection point of the following pairs of lines (if it exists). Label the system as consistent and independent, dependent, or inconsistent:

1.  $y = 4x - 16$   
 $y = -2x + 11$

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

3.  $3x + y = 7$   
 $7x + 2y = 10$

4.  $x + 2y = 6$   
 $3x - 2y = 2$

5.  $x - 2y = 5$   
 $2x - 10 = 4y$

6.  $x + 3y = 3$   
 $2x - 4y = 6$

7.  $4x + y = 7$   
 $2x + 5y = -1$

8.  $y = 4x + 2$   
 $\frac{1}{2}y - 2x = 4$

9.  $2x - 3y = 3$   
 $-2x + y = -4$

10.  $3x + 2y = -2$   
 $6x - y = 6$

11.  $8x + 2y = 2$   
 $x + 3y = 14$

12.  $5x + 6y = 8$   
 $8y + 3x = -4$

13.  $6y - 4x = 30$   
 $4x - 3y = -3$

14.  $2x + 5y = 47$   
 $8y - 38 = 3x$

15.  $7x + 8y = 16$   
 $x + 6y = -5$

16.  $3x - 5y = -66$   
 $5x + 7y = 74$

17.  $x + 3y = 11$   
 $6y = 22 - 2x$

18. I have a marble collection, and I'm wondering how much each of my marbles weighs. I weigh a jar with 14 marbles in it, and it weighs 18 oz. I weigh the same jar, but this time it has 20 marbles in it, and it weighs 24 oz. How much would the jar weigh if it had 50 marbles in it?

19. The air-mail rate for letters to Europe is 45 cents per half-ounce and to Africa as 65 cents per half-ounce. If Shirley paid \$18.55 to send 35 half-ounce letters abroad, how many did she send to Africa?

20. Ten gallons of a 30% acid mixture is obtained by mixing a 20% solution with a 50% solution. How much of each must be used?

21. Last weekend I drove for 15 hours. The first part of the trip I averaged 50 miles per hour, and the second part of the trip I averaged 70 miles per hour. In total, I drove 990 miles. How long did the first part of the trip take?