

You may use a regular calculator for this test.

1. Write the slope-intercept form of the equation of the line.

a. through (3, 4), and (3, 8)	b. through (-4, 2), perpendicular to $2x - 3y = 1$
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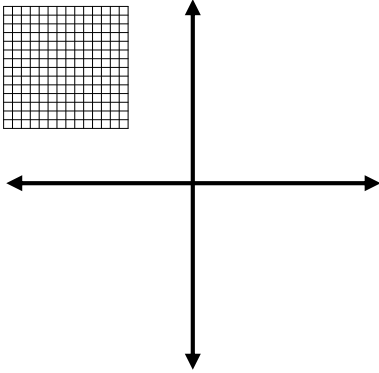
2 Solve.

a. $ 2x + 5 = 7$	b. $3 x - 2 = 10$
$ x + 3 - 5 < 5$. Graph your answer and give interval notation.	$3 x \leq 2$. Graph your answer and give interval notation.

3. Solve by graphing.

$$x = -3$$

$$2y + x = 1$$



4. Simplify, graph, and give the interval notation.

a. $-3(x-4) + 2x > 4x-3$

b. $-4x > 8$ OR $5x-1 \geq 4$

5. Solve the systems any way you want.

a. $3x + 2y = 4$
 $y = 2x - 5$

b. $3x - y = 7$
 $2y - 6x = -1$

6. A fish only lives at a depth between 30 feet and 10 feet below the surface of the water. Assuming water is at 0 feet elevation, write out a compound inequality that describes the level of water at which fish can live.

7. Aruzhanna needs to make more than \$500 working at the restaurant to buy the used car that she wants. If she makes \$300 in tips and \$8 per hour, write an inequality that represents Aruzhanna's situation and define any variables you are using. You do not have to solve it.

8. Solve using a system of equations. Any method is okay.

A chemist mixed a 10% salt solution with a 45% salt solution and got 25 liters of a 30% salt solution. How much of each did she mix together originally?

9. Solve using a system of equations. Any method is okay.

Cablevision has a \$60 setup fee and costs \$80 per month, and Comcrash has a \$160 equipment fee and costs \$70 per month. In how many months will the cost be the same? What will that cost be?

10. Solve using a system of equations. Any method is okay.

Thirteen donuts and four pieces of pie cost Mr. Simon \$24.00. Six donuts and two pieces of pie cost Mr. Simon \$11.40. How much did each donut and each piece of pie cost?

11. In order for a point to be a solution to a system of equations, which of the following is true?

- a) It must work in one equation
- b) It must work in at least one equation
- c) It must work in both equations
- d) None of the above