

## 2.2H Graphing Linear Equalities

Name: \_\_\_\_\_ Per: \_\_\_\_\_

SHOW YOUR WORK IN PENCIL ONLY. NO WORK, NO CREDIT.

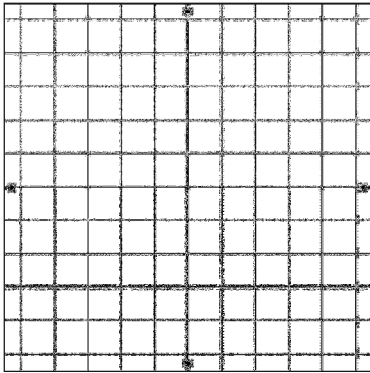
**Graph** the following inequalities. Make sure you **test a point** to know which side of the line you shade.

1.  $2x + 3y > 12$

x-intercept: \_\_\_\_\_

y-intercept: \_\_\_\_\_

Test Point: \_\_\_\_\_

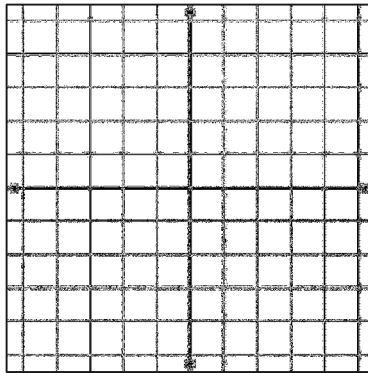


2.  $5x + 3y < 15$

x-intercept: \_\_\_\_\_

y-intercept: \_\_\_\_\_

Test Point: \_\_\_\_\_

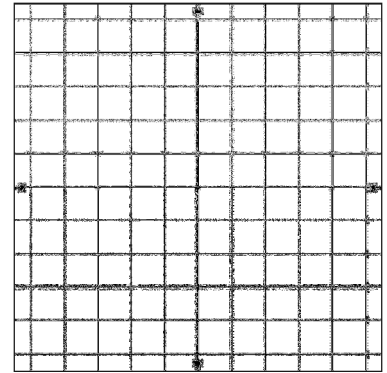


3.  $y + 6 > 2(x + 3)$

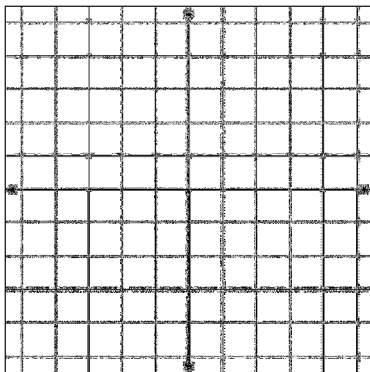
x-intercept: \_\_\_\_\_

y-intercept: \_\_\_\_\_

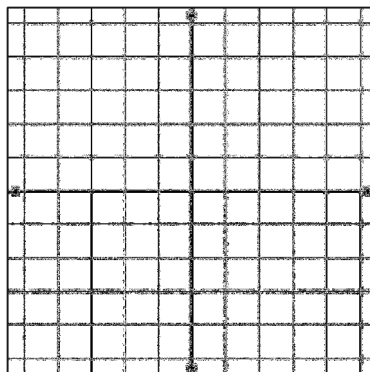
Test Point: \_\_\_\_\_



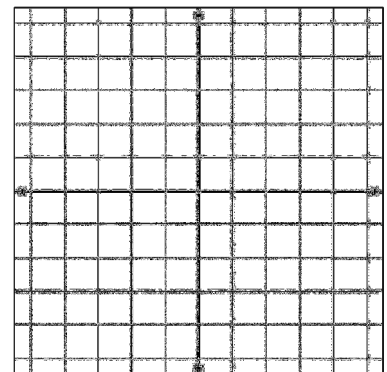
4.  $\frac{1}{2}x - 2y \geq 2$



5.  $-2y > \frac{2}{3}x - 8$



6.  $2y + 2 \leq -(x - 4)$



7. Looking at #6 above, answer the following questions.

- Is the point  $(2, 2)$  part of your solution set? \_\_\_\_\_ Explain \_\_\_\_\_
- Is the point  $(-2, 2)$  part of your solution set? \_\_\_\_\_ Explain. \_\_\_\_\_
- Is the point  $(-2, -2)$  part of your solution set? \_\_\_\_\_ Explain. \_\_\_\_\_
- Is the point  $(2, -2)$  part of your solution set? \_\_\_\_\_ Explain. \_\_\_\_\_

**Solve** the following inequalities for  $s$

8.  $-8s^2 > -6(8b + 4)$

9.  $s + 4w - 5 \leq -25 + 3(2w + 5)$

10.  $5 - (7 + 2s^2) - 2d^2 > d^2 + 10$

11.  $A = \frac{1}{2}sh$

12.  $K = \frac{as+bc}{bd}$

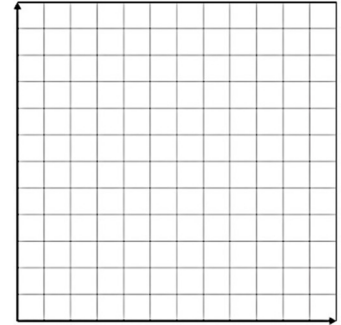
13.  $sr + h = sq - t$

VHMS is planning their next school play. They will charge \$2 per child ticket and \$5 per adult tickets.

14. Find the number of each type of ticket sold **to make exactly \$2000**. Show your work the following ways:

a. Table

<i>child</i>	<i>adult</i>
0	
	0
300	



b. Equation (EC. Write your equation in two different forms.)

\_\_\_\_\_

c. Graph.

d. On your graph above, graph the solutions if they must make **at least \$2000** on the play.

Use the inequality  $28 - 4x < 2(y - x)$  for #20-23.

15. Describe your graph including **at least 3 important details**. \_\_\_\_\_

16. Is (2, 7) part of the solution set? \_\_\_\_\_ Explain. \_\_\_\_\_

17. Is (3, 8) part of the solution set? \_\_\_\_\_ Explain. \_\_\_\_\_

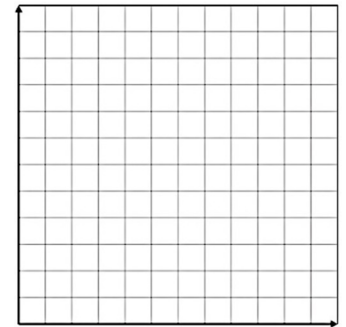
18. Martha works in a shoe store and receives **less than \$25** per day plus \$5.00 for each pair of shoes that she sells. Show your work in a table, inequality and graph.

a. Inequality: \_\_\_\_\_

<i># of shoes</i>	<i>Total \$</i>
0	
5	
15	

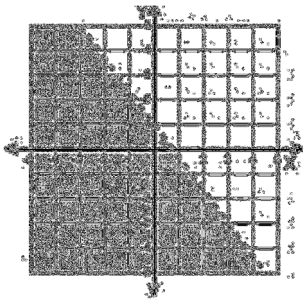
b. Table:

c. Graph

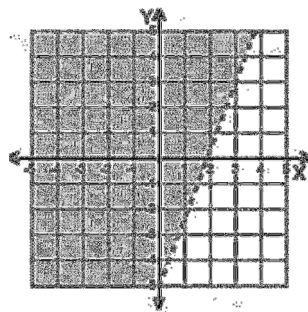


Write the inequality for the following graphs. Then **graph the second inequality** on the same grid.

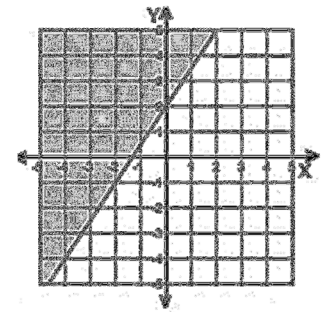
19. \_\_\_\_\_



Graph  $y \geq x - 1$



Graph  $-2y + 6 < x$



Graph  $2x - 4y \geq 8$

Write the following with the **lowest REAL integer radicand**.

21.  $\sqrt{-144}$

23.  $\sqrt{50}$

24.  $\sqrt{512}$

25.  $\sqrt{613}$

26.  $\sqrt[3]{27}$

27.  $\sqrt[3]{8}$