# 5.1

READY, SET, GO! **Name** **Period** **Date**

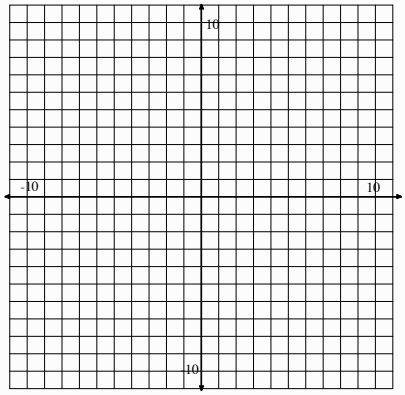
## *READY*

Topic: Solving system of equations by graphing.

**Substitute the given points into both equations to determine which ordered pair satisfies the system of linear equations. Graph both equations and label the point of intersection to verify the solution.**

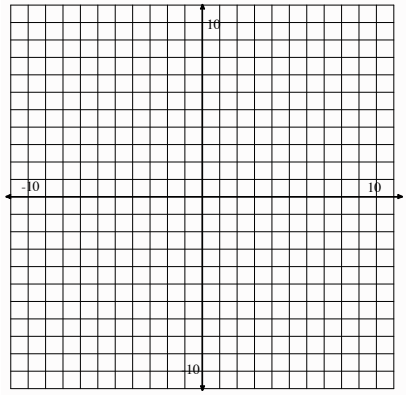
1. $y = 3x - 2$ *and* $y = x$

a. $(0, -2)$
b. $(2, 2)$
c. $(1, 1)$



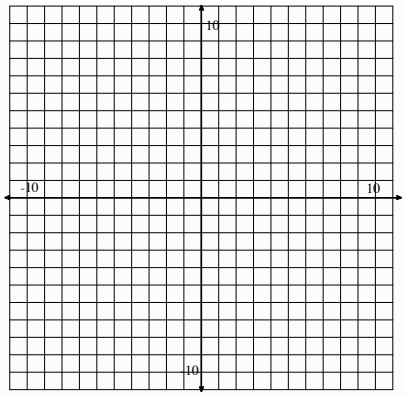

2. $y = 2x + 3$ *and* $y = x + 5$

a. (2, 7)
b. (-7, 11)
c. (0, 5)

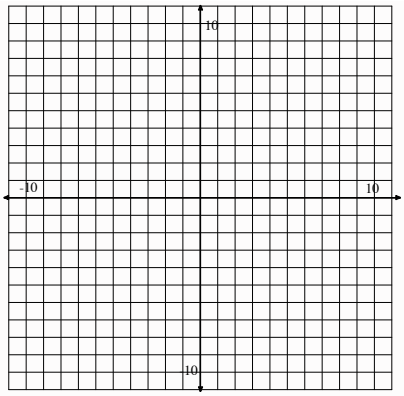



**Solve the following systems by graphing. Check the solution by evaluating both equations at the point of intersection.**

3. $y = x + 3$ *and* $y = -2x + 3$




4. $y = 3x - 8$ *and* $y = -x$



## *SET*

Topic: Determining possible solutions to inequalities

5. A theater wants to take in <u>at least</u> $2000 for the matinee. Children's tickets cost $5 each and adult tickets cost $10 each. The theater can seat up to 350 people. Find five combinations of children and adult tickets that will make the $2000 goal.

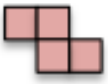
6. The Utah Jazz scored 102 points in a recent game. The team scored some 3-point shots, 2-point shots, and many free throws worth 1-point each. Find five combinations of baskets that would add up to 102 points.

7. Use as many of the following shapes in any combination as you need to try to fill in as much of the 12 by 12 grid as you can. You may rotate or reflect a shape if it helps. Write your answer showing how many of each shape you used using the letters that identify shape.

**Example:** 3a, 5b, 10c, 2d, 6e

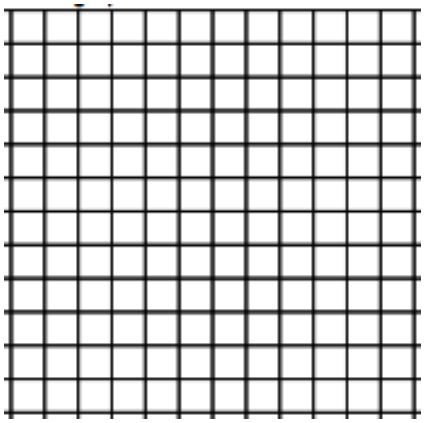
a. 

b. 

c. 

d. 

e. 

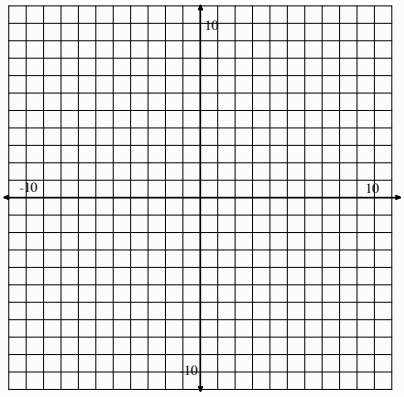


## GO

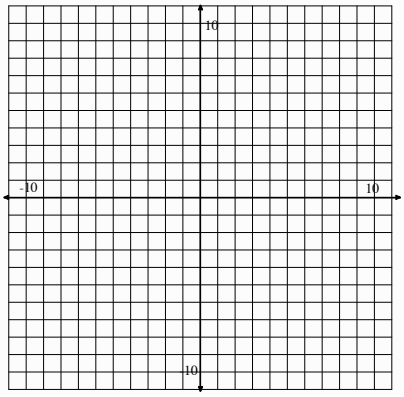
Topic: Graphing linear equations and determining if a given value is a solution, arithmetic sequences

**Graph each equation below; then determine if the point (3,5) is a solution to the equation. Find two points other than (3,5) that are solutions to the equation. Show these points on the graph.**

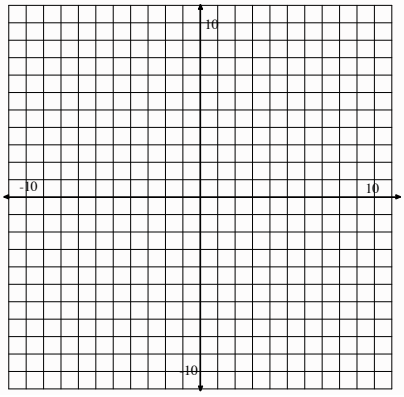
8. $y = 2x - 1$



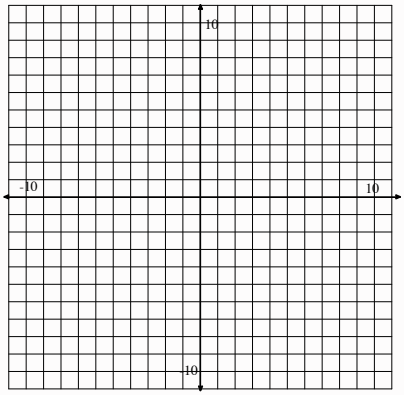

9. $y = \frac{1}{3}x + 2$




10. $y = -3x + 5$




11. $y = \frac{-3}{5}x + 4$




**The tables below represent <u>different</u> arithmetic sequences. Fill in the missing numbers. Then write the explicit equation for each.**

12.

| term (x) | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| value (y) | 17 | | | -7 |

Equation:

13.

| term(x) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| term(y) | 17 | | | | | | | | | | | | -7 |

Equation:

14.

| term (x) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| value (y) | 17 | | | | | | -7 |

Equation:

15. Each of the sequences above begins and ends with the same number. Would the graph of each sequence represent the same line? Justify your thinking.

16. If you graphed each of these sequences and made them continuous by connecting each point, where would they intersect?