# INTRODUCTION TO COORDINATES

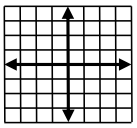
NAME:

*THIS HANDOUT IS DESIGNED TO BE USED WITH THE INTRODUCTION TO COORDINATES VIDEO.*

**WORDS YOU SHOULD KNOW.**

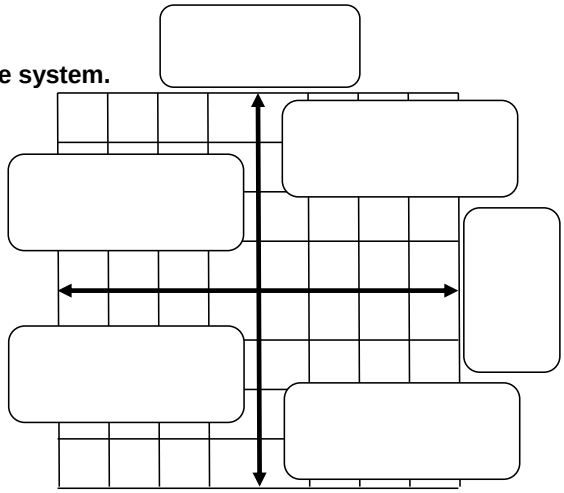
| | | | | |
|---|---|---|---|---|
| Axis | Vertical | Perpendicular | Coordinates | Equation |
| Origin | Horizontal | Quadrant | Ordered Pairs | Plane |
| | | | | Point |

The **Coordinate System** is a method of locating points in a plane or space by means of numbers.



**Label the coordinate system.**

1. x-axis
2. y-axis
3. quadrant I
4. quadrant II
5. quadrant III
6. quadrant IV



**Vocabulary. Fill in the blanks.**

1. Another word that means 90 degrees.

   _____

2. A flat surface that goes forever in all directions.

   _____

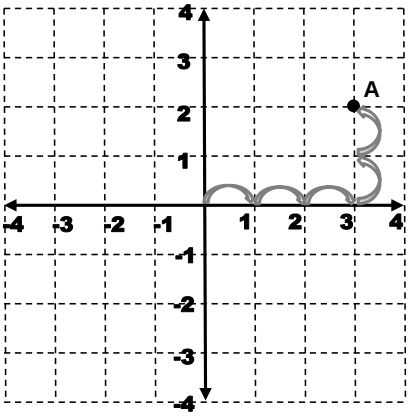
3. The x- and y-axes intersect at this point (0,0).

   _____

4. The numbers that locate a point or coordinates.

   _____

**Place and label the ordered pairs on the grid.**




A ( 3 , 2 )

T ( 0 , 3 )

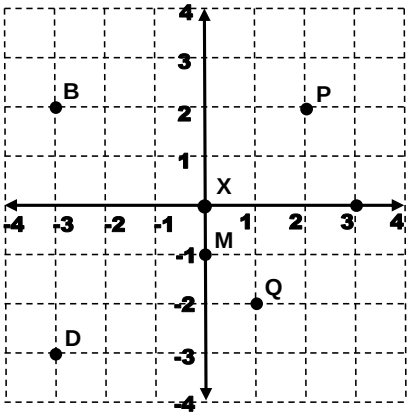
N ( -3 , 1 )

K ( 2 , -3 )

Y ( -2 , 0 )

R ( -1 , -3 )

**Write the coordinates for each point.**




D _____

X _____

Q _____

M _____

P _____

B _____

**Use the equations to find two coordinates for each line and create two lines on the grid below.**

$y = 4x - 2$

| $x$ | $y$ |
|---|---|
| 0 | -2 |
| 1 | |

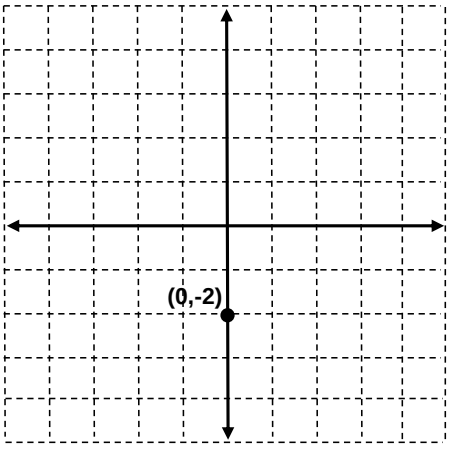
***POINT #1 HELP***

$y = 4x - 2$

$y = 4(0) - 2$

$y = 0 - 2$

$y = -2$




| $x$ | $y$ |
|---|---|
| | |

$y = 3 - x$

DID YOU NOTICE:

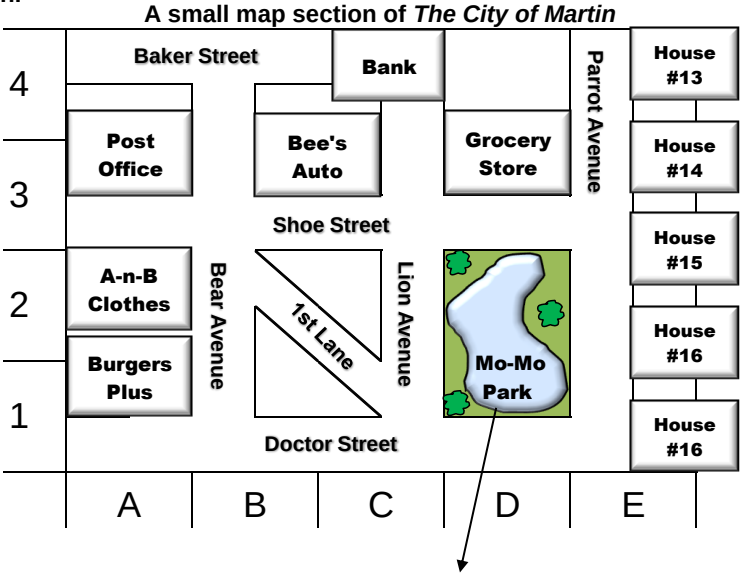
**1.** WHAT HAPPENS TO THE LINE WHEN A NEGATIVE IS NEXT TO THE X?

**2.** WHAT HAPPENS WHEN A NUMBER IS PLACED NEXT TO THE X?

NAME:

**Use the maps and coordinates to answer each question.**

**A small map section of *The City of Martin***




1. What are the coordinates of the Bank?

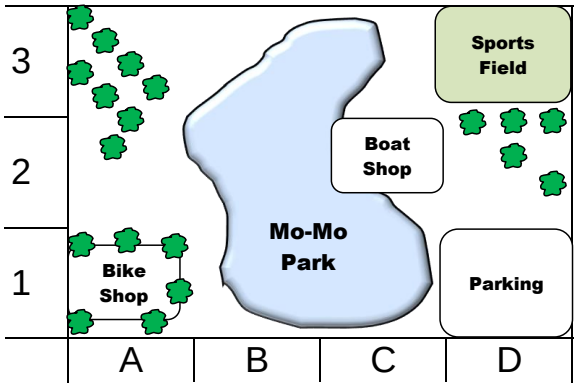
2. What is located at (A,2)?

3. House #16 is located at what coordinates?

4. What is located at (D,2)?

5. Where does Shoe Street intersect Bear Street?

**Use the park map to help answer the questions below.**




6. What are the coordinates of the Bike Shop?

7. What is located at (C,2)?

8. What two streets intersect by the Parking Lot?

**Battleship**

ARRANGE YOUR FOUR SHIPS SECRETLY ON THE GRID BELOW. EACH SHIP OCCUPIES A NUMBER OF CONSECUTIVE SQUARES (MUST BE ARRANGED IN A STRAIGHT LINE). THEY CAN BE ARRANGED HORIZONTALLY, VERTICALLY, OR DIAGONALLY. SEE BELOW FOR THE TYPE OF SHIPS AND THE NUMBER OF SQUARES FOR EACH ONE. THE SHIPS CANNOT OVERLAP (ONE SHIP PER SQUARE). TAKE TURNS CALLING OUT A SQUARE (EXAMPLE: B2). TELL THE PLAYER IF THEY MISS OR HIT YOUR SHIP. PUT "X" FOR HIT AND " • " FOR MISS ON EACH GRID. WHEN ALL OF THE SQUARES OF A SHIP HAVE BEEN HIT, THE SHIP IS SUNK. YOU MUST TELL YOUR OPPONENT WHEN HE OR SHE SINKS ONE OF YOUR SHIPS. WHEN ALL OF ONE PLAYER'S SHIPS HAVE BEEN SUNK, THE GAME IS OVER AND THE OTHER PLAYER WINS.

***YOUR SHIPS AND OPPONENT'S SHOTS***

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 8 | | | | | | | | |
| 7 | | | | | | | | |
| 6 | | | | | | | | |
| 5 | | | | | | | | |
| 4 | | | | | | | | |
| 3 | | | | | | | | |
| 2 | | | | | | | | |
| 1 | | | | | | | | |

**SHIPS**

1. BATTLESHIP
   *5 SQUARES*
2. DESTROYER
   *4 SQUARES*
3. SUBMARINE
   *3 SQUARES*
4. PATROL BOAT
   *2 SQUARES*

***YOUR SHOTS***

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 8 | | | | | | | | |
| 7 | | | | | | | | |
| 6 | | | | | | | | |
| 5 | | | | | | | | |
| 4 | | | | | | | | |
| 3 | | | | | | | | |
| 2 | | | | | | | | |
| 1 | | | | | | | | |