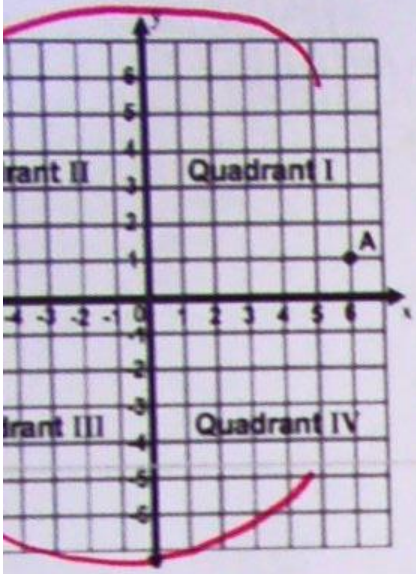
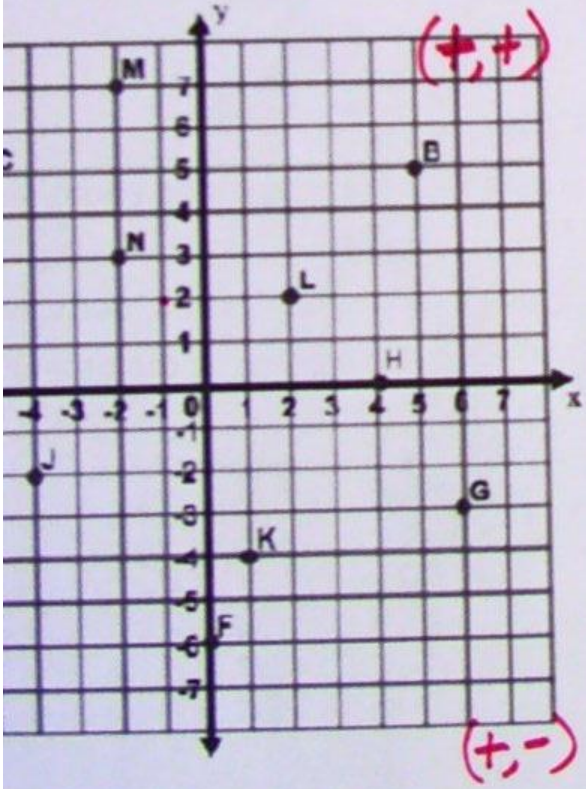
ian coordinate system was developed by the mathematician Descartes during an 1637. As he lay in bed sick, he saw a fly buzzing around on the ceiling, which was quare tiles. As he watched he realized that he could describe the position of the fly ing tile he was on. After this experience he developed the coordinate plane to make describe the position of objects.




A **Cartesian coordinate plane** has two intersecting number lines that form axes.
The horizontal axis is called the *x*-**axis** and the vertical axis is called the *y*-**axis**.
The axes intersect at the point called the **origin**.
The axes divide the coordinate plane into four **quadrants**.
A point on the plane can be described by its *x* and *y* coordinates. These coordinates are written as an ordered pair: (*x*, *y*) .

- The coordinates of the origin are [0, 0]
- The coordinates of point A are [6,1] where 6 and 1 is and **ordered pair**



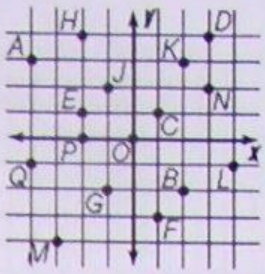

1. Name the point that has the coordinates.
a. (2, 2) L  b(-6, 2) D  c.(1,-4) K
d.(0,-6) F  e (-4,-2) J

2. Write the coordinates of each point.
a. B (5,5)  b. G (6,-3)  c. E (-6,-5)
d. N (-2,3)  e. H (4,0)

3. In what quadrant is each point located?
a. C II  b. J III  c. L I
d. M II  e. K IV

which quadrant would the following points be found:
) **Quadrant:** I  2) (1, 2) **Quadrant:** I  3) (2, 1) **Quadrant:** I
2) **Quadrant:** II  5) (439, -890) **Quadrant:** IV  6) (-1, -1) **Quadrant:** III

e the ordered pair for each point graphed on the linate plane.




2. $J$

4. $G$

6. $O$

8. $A$

t point is located at the following coordinates? Then e the quadrant in which each point is located.

3, 2) N, I

10. $(-3, -4)$

11. $(1, -3)$

12. $(-2, 0)$

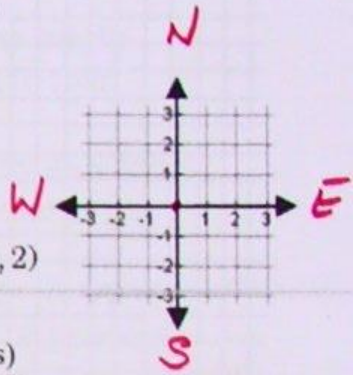
$-4, -1)$

14. $(1, 1)$

15. $(3, 4)$

16. $(2, 3)$

**Standardized Test Practice** In a small town, all streets are east-west r north-south. City Center is at (0, 0). City Hall is 1 block north of ity Center at (0, 1). City Hospital is 1 block east of City Center at 1, 0). If City Library is 3 blocks north and 2 blocks west of City enter, which ordered pair describes the location of City Library?

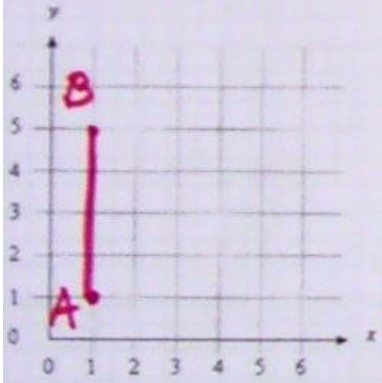



A (2, 3) B $(-2, 3)$ C (3, −2) D (3, 2)

ot and label each set of points on a different plane and join them in order to form a lateral. Identify the quadrilateral. (parallelogram, trapezoid, rectangle, square, rhombus)

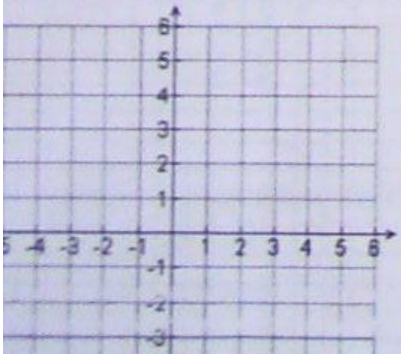
1, 1), B(1, 5), C(3, 5), D(3, 1).

Irilateral: _____



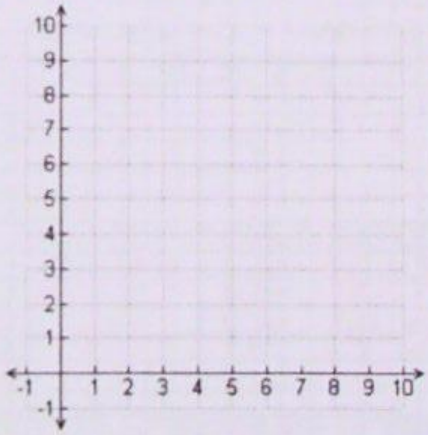

, 5), Q(0, 3), R(2, 0), S(5, 2).

rilateral: _____



**b.** J(1, 3), K(5, 1), L(8, 1), M(4, 3).

Quadrilateral: _____



**d.** W(1, 1), X(4, 1), Y(6, 3), Z(0, 3).

Quadrilateral: _____