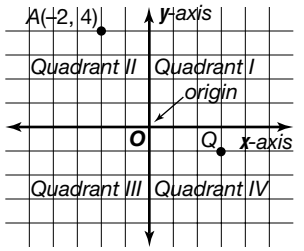
NAME _____ DATE _____

2-2 The Coordinate System (Pages 72–76)

Coordinate System	A **coordinate system** is formed by two number lines, called **axes**, that intersect at their zero points. The axes separate the coordinate plane into four regions called **quadrants**.



Any point on the coordinate system is described by an ordered pair, such as (1, −2). In this ordered pair, 1 is the ***x*-coordinate** and −2 is the ***y*-coordinate**. If you put a dot on a coordinate system at the point described by (1, −2), you are **plotting the point**. The dot is the **graph** of the point.

EXAMPLES

A Graph $A(-2, 4)$ on the coordinate system.

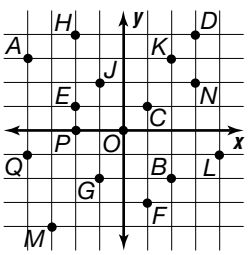
Refer to the coordinate system above. Start at the origin. Move 2 units to the left. Then move 4 units up and draw a dot. Label the dot A(−2, 4).

B What is the ordered pair for point Q on the coordinate system above?

Start at the origin. To get to point Q, move 3 units to the right, and then move 1 unit down. The ordered pair for point Q is (3, −1).

PRACTICE

Name the ordered pair for each point graphed on the coordinate plane.



1. H **2.** J

3. L **4.** G

5. E **6.** O

7. B **8.** A

What point is located at the following coordinates? Then name the quadrant in which each point is located.

9. (3, 2) **10.** (−3, −4) **11.** (1, −3) **12.** (−2, 0)

13. (−4, −1) **14.** (1, 1) **15.** (3, 4) **16.** (2, 3)

17. **Standardized Test Practice** In a small town, all streets are east-west or north-south. City Center is at (0, 0). City Hall is 1 block north of City 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 Center, which ordered pair describes the location of City Library?

A (2, 3) **B** (−2, 3) **C** (3, −2) **D** (3, 2)

Answers: **1.** (−2, 4) **2.** (−1, 2) **3.** (4, −1) **4.** (−1, −2) **5.** (−2, 1) **6.** (0, 0) **7.** (2, −2) **8.** (−4, 3) **9.** N; quadrant I **10.** M; quadrant III **11.** F; quadrant IV **12.** P; no quadrant **13.** Q; quadrant III **14.** C; quadrant I **15.** D; quadrant I **16.** K; quadrant I **17.** B