

1 Learn the Skill

A **coordinate grid** is a visual representation of points, or ordered pairs. An **ordered pair** is a pair of values: an x -value and a y -value. The x -value is always shown first. The grid is made by the intersection of a horizontal line (x -axis) and a vertical line (y -axis). The point where the number lines meet is called the **origin**, which is $(0, 0)$. The grid is divided into four **quadrants**, or sections.

The upper-right section of a grid is the first quadrant. Move counterclockwise to name the remaining quadrants. In an ordered pair, the first value (x -value) tells how many spaces to move (right for positive or left for negative). The y -value tells how many spaces to move (up for positive or down for negative).

2 Practice the Skill

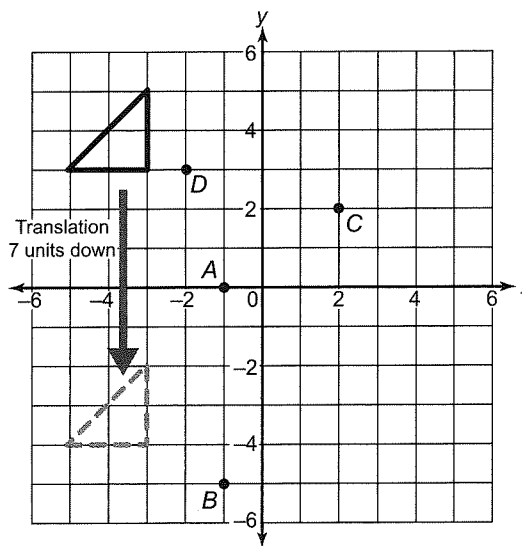
By practicing the skills of locating and plotting points on the coordinate grid, you will improve your study and test-taking abilities, especially as they relate to the GED® Mathematical Reasoning Test. Study the grid and information below. Then answer the question that follows.

The coordinate grid below shows points A , B , C , and D . The coordinates for point A are $(-1, 0)$. Point B is located at $(-1, -5)$.

a To draw a line segment on the coordinate grid, plot the given points. Then draw a line to connect them.

b Changes to figures or points can be shown on a coordinate grid. A translation is one type of change. In a *translation*, a figure or point slides to a new position in a different quadrant.

c To plot a point whose y -coordinate is an expression, substitute the given value of x and solve for y . Then plot the point.



1. What are the coordinates of point C ?

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

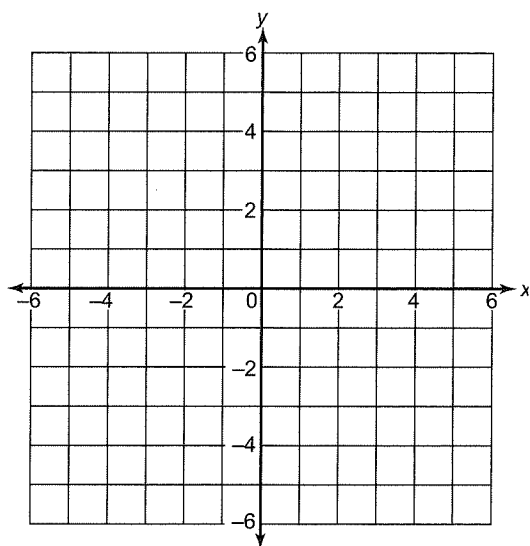
INSIDE THE ITEMS

On the GED® Mathematical Reasoning Test, you will be asked to plot points on coordinate grids using technology. When you do, ensure that you click on the proper coordinates.

3 Apply the Skill

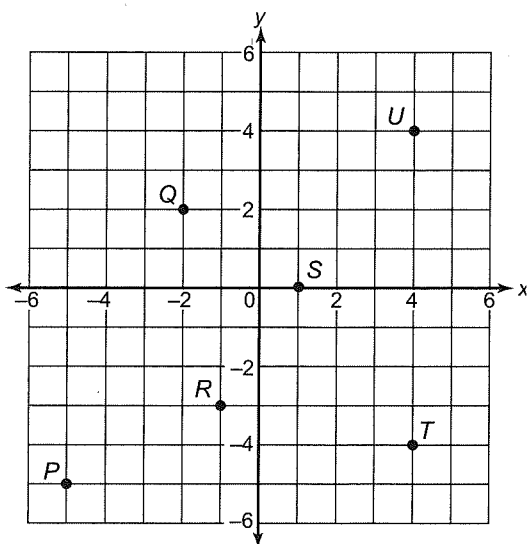
★ Spotlighted Item: **HOT SPOT**

DIRECTIONS: Read each question. Then mark your answer on the grid below.



2. Plot the point $(5, -3)$.
3. Translate the point $(5, -3)$ up 6 units.
4. Plot the point $(4, 0)$.
5. Translate the point $(4, 0)$ left 3 units.
6. Plot the point (x, x^2) for $x = 2$.
7. Plot the point $(x, 0.75x)$ for $x = -4$.
8. Plot the point (x, x^3) for $x = -1$.

DIRECTIONS: Study the coordinate grid, read each question, and choose the **best** answer.



9. What are the coordinates of point T ?
 - A. $(5, -4)$
 - B. $(4, -4)$
 - C. $(4, -5)$
 - D. $(-4, 4)$
10. Which of the following ordered pairs describes the location of point S ?
 - A. $(1, 0)$
 - B. $(-1, 0)$
 - C. $(0, 1)$
 - D. $(0, -1)$
11. What are the coordinates of point P ?
 - A. $(-5, -5)$
 - B. $(-5, 5)$
 - C. $(5, -5)$
 - D. $(5, 5)$
12. What characteristic do points T and U share?
 - A. They have the same y -coordinate.
 - B. They have the same x -coordinate.
 - C. Both points have two negative x -axis coordinates.
 - D. Both points have two positive y -axis coordinates.