

Math by Design Hint Pages

Translations on a Coordinate Plane

Flossville Park, Alley Oops Subtask 3: Move the skateboarder along the rail.

Windjammer Center, Get Physically Fit Subtask 2: Place the cones.

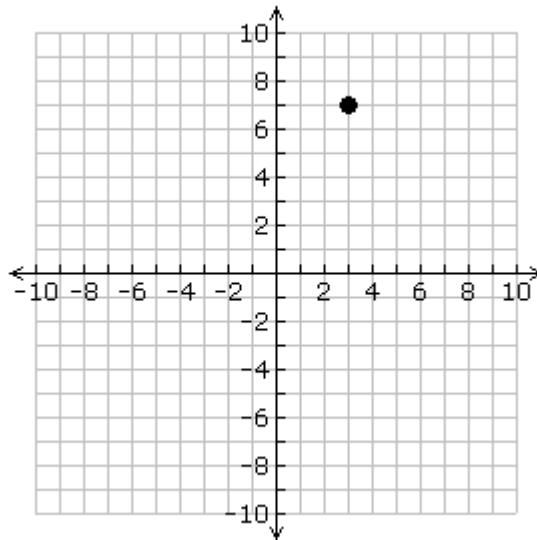
Windjammer Center, Get Physically Fit Subtask 3: Place the hurdles.

Windjammer Center, Illuminate Task: Replace the lights.

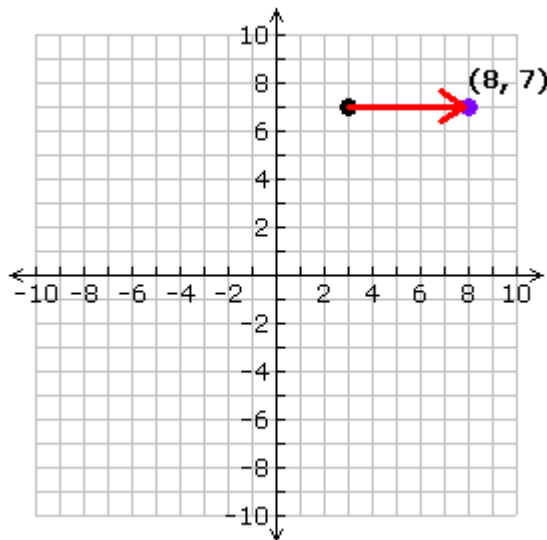
When a point or figure on a coordinate plane is moved by sliding it to the right or left or up or down, the movement is called a **translation**. The figure is **translated** from one position to another.

Example 1:

A point is located at $(3, 7)$ on the coordinate plane. What are the coordinates of the point after it is translated 5 units to the right?



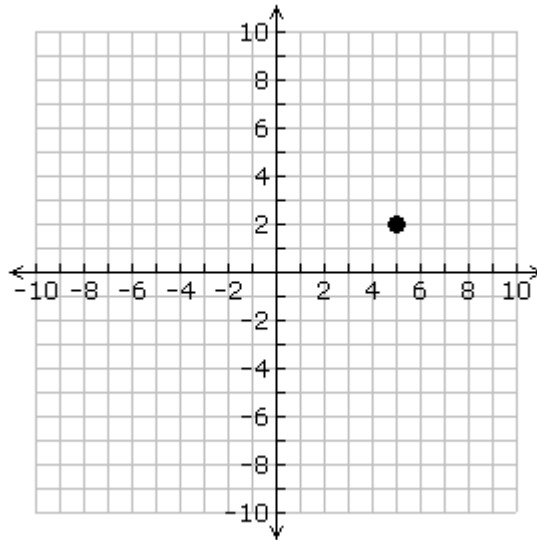
Answer: The point moves 5 units to the right as indicated by the red arrow. The coordinates of the point after it is translated are $(8, 7)$.



Math by Design Hint Pages

Example 2:

A point is located at $(5, 2)$. What are the coordinates of the point after a translation of 3 units to the left, followed by another translation of 7 units up?



First the point is moved two units to the left, ending at $(2, 2)$. Then the point moves 7 units up. The final location after both translations is at the point with coordinates $(2, 9)$.

