

OBJECTIVE

understand game design 1.7B

WORK WITH XNA

SCENARIO: Jay Hamlin, a game designer at Trey Research, has been assigned to assist a senior developer who is working on a game to teach geometry fundamentals to middle school students. Jay's task is to program a portion of the game that will move rectangles around a screen based on keyboard input. He is aware that the XNA® methods (*Initialize*, *Update*, *Draw*) can provide much of the functionality he needs for this task. Before he wastes valuable time writing code that might need to be revised later, Jay decides it is wise to evaluate which method is the most appropriate location for code that will control various actions related to the rectangle movements.

For each situation below, select the most appropriate method for including the code that will control the action described.

1. **Set the starting location of the rectangle to (50,100).**
 - a. *Initialize*
 - b. *Update*
 - c. *Draw*
2. **Display the rectangle in the game window.**
 - a. *Initialize*
 - b. *Update*
 - c. *Draw*
3. **Increment the x-coordinate of the rectangle when the right arrow key is pressed.**
 - a. *Initialize*
 - b. *Update*
 - c. *Draw*

HINT



A Rectangle object has four properties: the x and y coordinates of the upper-left corner, width, and height.

Answers

1. Set the starting location of the rectangle to (50,100).
 - a. **Initialize**
2. Display the rectangle in the game window.
 - c. **Draw**
3. Increment the x-coordinate of the rectangle when the right arrow key is pressed.
 - b. **Update**

Essential details

- **XNA Game Studio** is a framework of code and a run-time environment for game development.
- The **game loop** is the update and draw cycle.
- The **Initialize** method controls the starting values of game data.
- The **Draw** method displays the game graphics.
- The **Update** method performs the game logic, such as updating the location of an image.

FAST TRACK HELP

- **XNA Game Studio**
<http://msdn.microsoft.com/en-us/library/cc178930.aspx>
- **Miles, Rob. *Microsoft XNA Game Studio 4.0: Learn Programming Now!***
(Redmond: Microsoft Press, 2011)

