

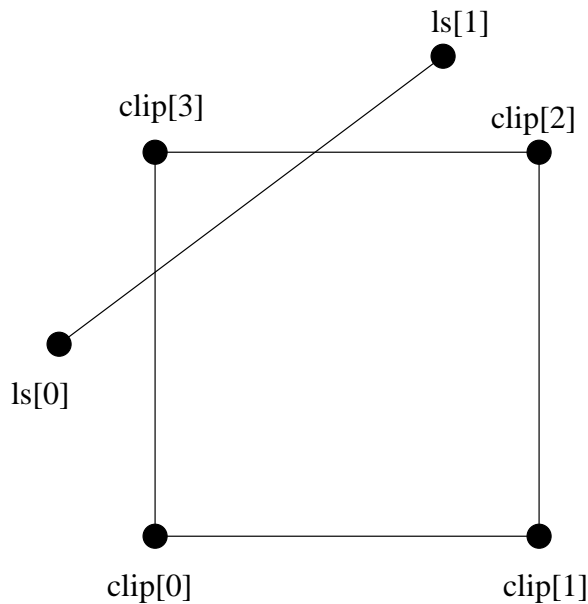
# Assignment 2

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Due Feb. 13

Each of the following problems is worth five points.

1. Write the OpenGL statements necessary to display a magenta window of size  $300 \times 400$  at position  $100 \times 200$  on the desktop.
2. Explain the difference between world coordinates and window coordinates.
3. In practice, testing each point in a polygon to determine whether it is inside or outside the polygon is extremely inefficient. Describe the general strategies that you might pursue to avoid point-by-point testing.
4. Consider clipping a line segment, defined by two vertices, against a rectangular clipping window, defined by four vertices, in two dimensions:



Note: each vertex has x and y components.  
For example: clip[0].x and clip[0].y .

Devise a test to determine whether the line segment is not clipped, is partially clipped, or is totally clipped.