Apply the Sutherland-Hodgman Polygon Clipping algorithm to the above polygon (vertices 1-5). Use the indicated clipping windows. Show all steps.

L
{1, 2} out-in {1', 2'}
{2, 3} in-in {3}
{3, 4} in-in {4}
{4, 5} in-in {5}
{5, 1} in-out {5''}

R
{1', 2'} in-out {1''}
{2, 3} in-out {2', 3'}
{3, 4} in-in {4'}
{4, 5} in-in {5'}
{5', 5''} in-in {5'''}
{5', 1'} in-in {1'''}

B
{1', 2'} out-in {1'', 2''}
{2', 3} in-in {3}
{3, 4} in-in {4}
{4, 5} in-in {5}
{5', 5''} in-in {5'''}
{5', 1'} in-out {5'''}

{1'', 1'''} in-in {1''''}

Final polygon:
2', 3' → 3''→ 5''''
2) We have a filled polygon that doesn't fit in the clipping window. Use an appropriate clipping algorithm to clip the polygon. (Use Sutherland-Hodgman OR Weiler-Atherton whichever is most appropriate)

Can't use Sutherland-Hodgman because not split with single set of vertices

\[1 \to 2 \to 3' \to 2' \to 3\]

\[3 \to 4 \to 5 \to 6 \to 6' \to C W I \to 5' \to 4\]

\[6 \to 7 \to 1 \text{ Done}\]

2 vertex sets

\[3, 3', 2'\]

\[6, 6', C W I, 5'\]