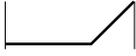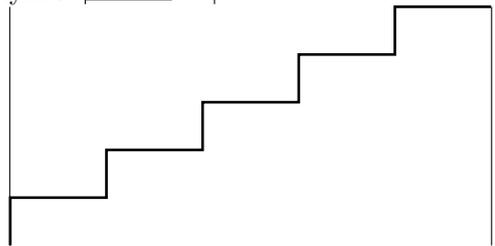Test 1: a simple polyline:

Test 2: a staircase:

Test 3: several regular polygons: