

After being in Pattern 1 or 2, we're most likely in above  $V_{th}$ . If next, continue these patterns, the input voltage is less and we won't saturate the opamp. If we end up above  $V_{th}$ , we "ram" the integrator down 2x as much as in Pattern 1 & 2, so we'll end up in the opposite direction, most likely below  $V_{th}$ .

