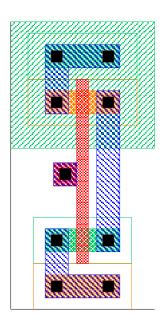
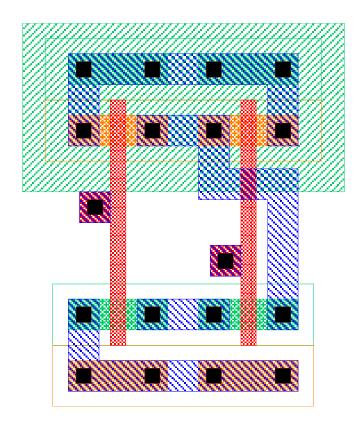
## 1. Consider the following layout for a CMOS inverter:



- (a) The bar at the very top is  $V_{dd}$ , the one at the bottom is GND.
- (b) Try to identify the PMOS and NMOS transistors. (Hint, the PMOS is on top and the NMOS is on bottom, like we draw schematics.)
- (c) Can you identify how the PMOS and NMOS transistors are connected?
- (d) Where is the output?
- (e) Where is the input?

2. Consider the following layout:



- (a) How many PMOS transistors?
- (b) How many NMOS transistors?
- (c) How are the PMOS and NMOS transistors connected?

PMOS

NMOS

(d) How is the output connected to the transistors?

- (e) How are the inputs connected?
- (f) What function does this circuit perform?