

4.16:

| V_{in} | Result |
|----------|---------------|
| 0.1 | Low |
| 1.2 | Low |
| 2.0 | Indeterminate |
| 3.5 | High |
| 4.5 | High |

- 4.14:
- a) pins D12 & 13
 - b) pins D8, 9, 10, & 11
 - c) pins A0 & A1
 - d) pins D5 & 6
 - e) the 5V & GND pins

4.8: $1011 + 0010 = 1101$

$00011101 + 01001111 = 01101100$

$$\begin{array}{r} 12 \\ \times 010 \\ 001 \\ \hline 011 \end{array}$$

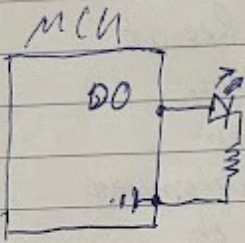
$\rightarrow 1010 - 0011 = 0111$

$00101001 - 00010101 = 00010100$

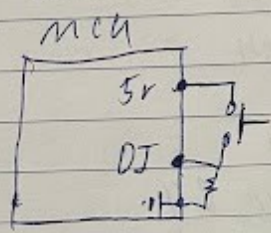
$$\begin{array}{r} 00101001 \\ 00010101 \\ \hline 00010100 \end{array}$$

4.19

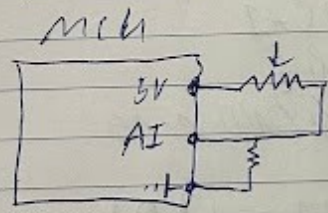
a)



b)



c)



4.18

