

7.21 N-bit muxes

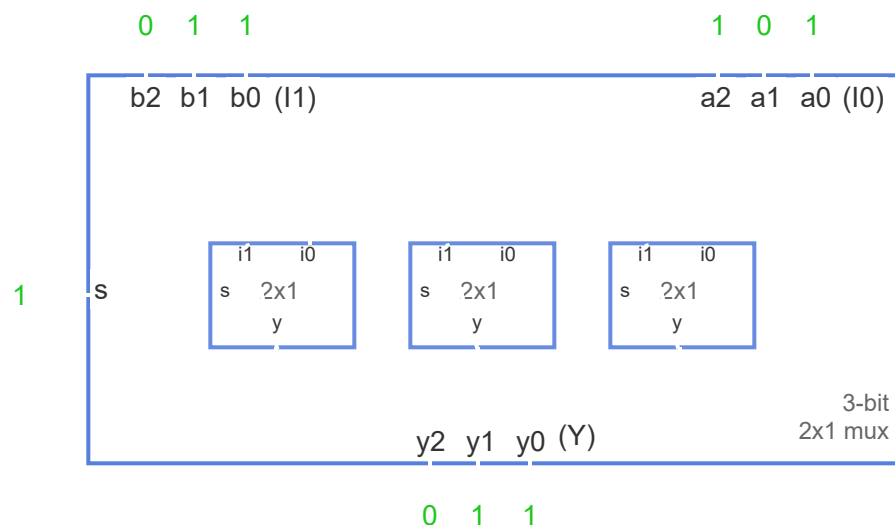
Commonly, multiple data bits are muxed.

PARTICIPATION ACTIVITY

7.21.1: 3-bit 2x1 mux.

Start

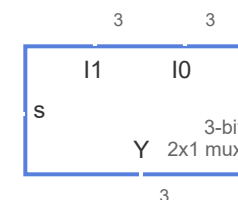
☐ 2x speed



Function table

s	Y
0	I_0
1	I_1

Block symbol



PARTICIPATION ACTIVITY

7.21.2: Configuring a 3-bit 2x1 mux.

Configure a 3-bit 2x1 to obtain the desired result.

1) If $s = 1$, $y_2y_1y_0 = ?$

- ☐ $a_2a_1a_0$
☐ $b_2b_1b_0$

2) To pass $a_2a_1a_0$ to $y_2y_1y_0$, $s = ?$

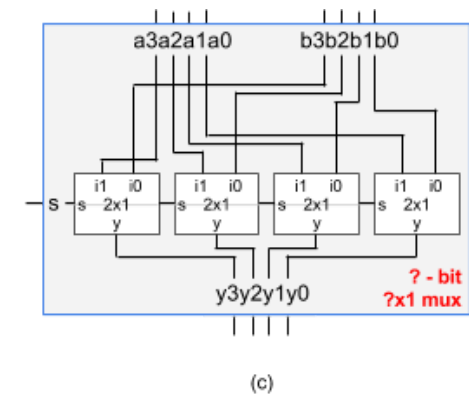
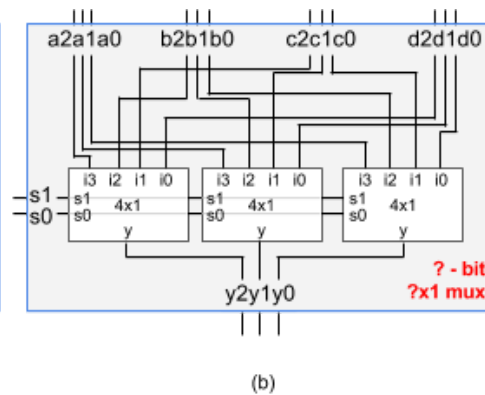
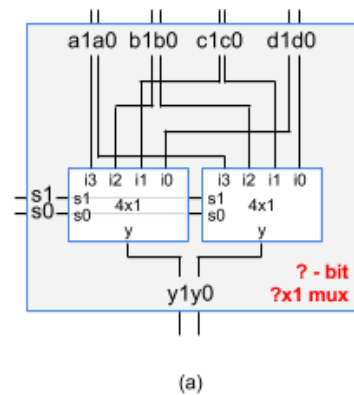
- ☐ 0
☐ 1

3) To pass I_1 to Y , $s = ?$

- ☐ 0
☐ 1

PARTICIPATION ACTIVITY

7.21.3: Different mux sizes.



(a) (b) (c)

4-bit 2x1 mux

2-bit 4x1 mux

3-bit 4x1 mux

Reset

 **Provide feedback on this section**