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WE3.1

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Calculator

Video explanation of solution is provided below the problem.

CMOS Functions

1/1 point (ungraded)  
A single CMOS gate, consisting of an output node connected to a single pullup circuit containing zero or more PFETs and a single pulldown circuit containing zero or more NFETs, computes  $F(A, B, C, D)$ . It is observed that  $F(1,0,1,1) = 1$ . What can you say about the value of  $F(1,0,0,0)$ ?

$F(1, 0, 0, 0) =$

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CMOS Functions

## Functions Implemented by CMOS Circuits

- CMOS gate has  $F(1,0,\underline{1},1) = 1$
- What can you say about  $F(1,0,\underline{0},0)$ ?

$F(0,0,0,0) = 1$   
 $F(1,1,1,1) = 0$

(Caption will be displayed when you start playing the video.)

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Discussion

Topic: 3. CMOS / WE3.1

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[Observation on CMOS circuits](#)  
If I did something "stupid" like build a circuit so the output  $F(A,B,C,D)$  is equal to  $D$ , then  $F(1,0,1,1) = 1$  and  $F(1,0,0,0) = 0$ . It seems there i...

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Calculator



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