

1. What Does This Program Do - Looping

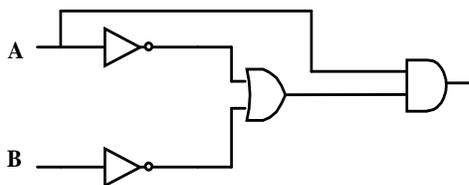
When the following program is run, what is the last element of array B that is modified?

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FOR J =5 TO 1 STEP -1
  FOR K = 3 TO 10 STEP 2
    B(J,K) = J + K
  NEXT K
NEXT J
    
```

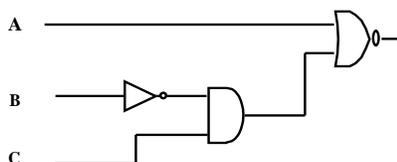
2. Digital Electronics

Write the Boolean expression that is the exact translation of the following circuit:



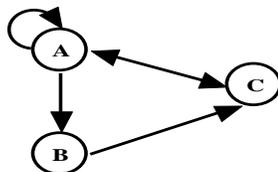
3. Digital Electronics

Find all ordered triplets (A,B,C) that make the following circuit TRUE.



4. Graph Theory

How many different paths of length 2 exist in the following directed graph?



5. Graph Theory

How many cycles exist in the following directed graph?

