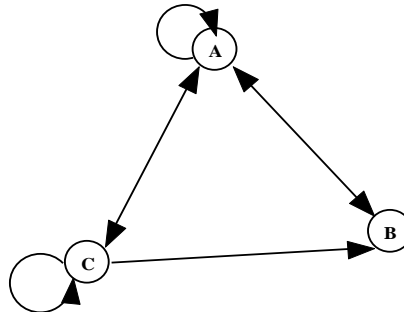


INTERMEDIATE DIVISION

1. Graph Theory

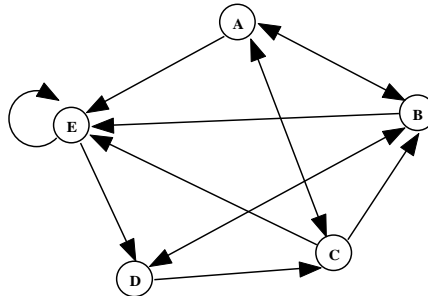
How many paths of length 3 are there in the directed graph at the right?



1.

2. Graph Theory

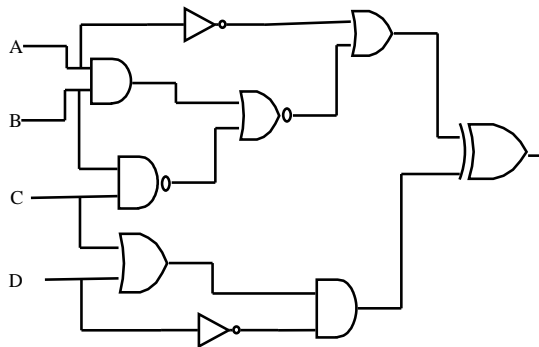
How many cycles are there from A in the directed graph at the right?



2.

3. Digital Electronics

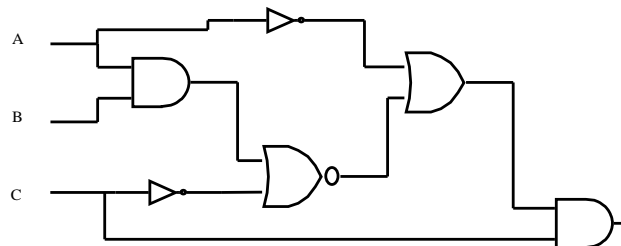
Translate the digital circuit into the Boolean expression it represents. Do not simplify.



3.

4. Digital Electronics

How many ordered triples make the digital circuit TRUE?



4.

INTERMEDIATE DIVISION**5. Assembly Language**

What is output after this program is executed?

```
A  DC   36
LOAD  A
DIV   = 10
STORE B
MULT  = 10
STORE C
LOAD  A
SUB   C
STORE D
MULT  = 10
ADD   B
STORE E
SUB   A
DIV   = 9
STORE G
PRINT G
END
```

5.