Intermediate Division Short Problems

## 1. Digital Electronics

Find all ordered pairs $(A, B)$ that make the following circuit TRUE.

2. Digital Electronics

Translate the circuit to a Boolean expression and simplify.

3. Boolean Algebra

Simplify so that only AND and NOT symbols are used

```
    A(B+C)+B(A+C)+C(A+B)
```


## 4. Graph Theory

Which of the following are simple paths in the following diagram?

A) ECAD
B) BCABD
C) EDCAB
D) CADCB
E) None of the above

## 5. Graph Theory

Write the adjacency matrix for the following graph.


