1. (i) $3 \times |v| = 9 \times 2$

$|v| = 6$

(ii) $|v| \cdot (|v| - 1) = 28 \times 2$

$|v| = 8$

(iii) $2 \times 4 + (|v| - 2) \times 3 = 10 \times 2$

$|v| = 6$

(iv) Assume $|v| = a + b$.

$ab = 5 = 5 \times 1$ since both 5 and 1 are prime number,

so $|v| = 5 + 1 = 6$.

2.
```
public void readMatrix(int[][] matrix){
    for (int i=0; i< matrix.length; i++){
        boolean haveIncident = false
        for(int j=0; j<matrix[0].length; j++){
            haveIncident || matrix[i][j];
        }
        if(! haveIncident){
            System.out.println("No incident edge");
        }.
```

$(z \equiv 1 \mod 12.$

3. 1 is an inverse of 1 modulo 12.

5 is an inverse of 5 modulo 12.

7 is an inverse of 7 modulo 12.

11 is an inverse of 11 modulo 12.