ECE 573
Problem Set 10: Dependence analysis

1. Draw the iteration space graph for the following loop:

```
for (int i = 0; i < 10; i++) {
    for (int j = 0; j < 10; j++) {
        A[i][j] = A[i - 1][j + 2] + A[i][j - 2];
    }
}
```

2. Show the distance vector(s) for the loop from the previous problem.

3. Show the direction vector(s) for the loop.

4. Can the two loops be interchanged? Why or why not?

5. Repeat the previous four steps for the following loop:

```
for (int i = 0; i < 10; i++) {
    for (int j = 0; j < 10; j++) {
        A[i][j] = A[i - 1][j - 2];
    }
}
```