

Wednesday, November 20

Name \_\_\_\_\_

Email \_\_\_\_\_

6.035 Fall 2019

Miniquiz #34

5 minutes

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Consider the following program:

```
for (i = 0; i < n; i += 1) {  
    for (j = 0; j < n; j += 1) {  
        A[i,j] = A[i - 1, j - 2] + 3;  
    }  
}
```

$A[i, j]$  means the element at the  $i$ -th row and  $j$ -th column in the 2-dimensional array  $A$ . Ignore out-of-bound array access.

What is the distance vector for these loops?

Assume that  $n = 4$ . Draw the iteration space grid below, using dots to represent the values of  $i$  and  $j$  for an iteration and arrows to represent dependencies.