

## Q1 Instructions

0 Points

To receive full credit on this quiz, you must score at least 50%.

The Github repo for Lecture 12 is at:

<https://github.com/ucsd-cse12-sp21/ucsd-cse12-sp21.github.io/tree/master/lectures/lecture-12>

## Q2 Run-Time

2 Points

```
// This method returns whether or not a pair of numbers,  
// num1 and num2, are between 1-m and 1-n, respectively  
boolean findPair(int num1, int num2, int m, int n) {  
    for (int i = 1; i <= m; i++) {  
        if (num1 == i) {  
            for (int j = 1; j <= n; j++) {  
                if (num2 == j) {  
                    return true;  
                }  
            }  
        }  
    }  
    return false;  
}
```

### Q2.1 Worst Case Runtime

1 Point

What is the worst case runtime of findPair?

- ☒  $O(m+n)$
- ☐  $O(m*n)$
- ☐  $O(m/n)$
- ☐  $O(m)$
- ☐  $O(n)$

### Q2.2 Best Case Runtime

1 Point

What is the best case runtime of findPair given it returns false?

- ☐  $O(1)$
- ☐  $O(m+n)$
- ☐  $O(m*n)$
- ☒  $O(m)$
- ☐  $O(n)$