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CS 284 Midterm

Exercise 1:

1. True
2. True
3. True
4. False

Exercise 2:

1. D
2. C
3. B

Exercise 3:

1. ~N comparisons
2. f(n) = O(g(n)) if there exists a positive integer n0 and a positive constant c, such that
   f(n)<= c*g(n) for all n >= n0
   0.5n + 255<= 0.5n

3. F, D, B, E, C, A

Exercise 4:

```
Node curr = head;

while (curr != null){
        if (curr.data == c){
                Return true;
        }
        curr = curr.next;
}

return false;
```

Exercise 5:

```
// insert node P after given node M
Node curr = head;
While (curr != null){
        If curr.data = M.data{
                Node P = new Node(new_data);
                P.next = M.next
                M.next = P;
```

```
                P.prev = M;
            }
            Curr = curr.next;
    }
    return;
```