

IF264 - Métodos Computacionais

Prof. Paulo Freitas

Lista de Exercícios 9

Questão 1) Analise os trechos de código a seguir e determine a sua complexidade com a notação Big O justificando as suas respostas.

a)

```
def example1(items):  
    for item in items:  
        print(item)  
    for item in items:  
        print(item)
```

b)

```
def example2(items):  
    for item in items:  
        for item2 in items:  
            print(item, ' ', item2)
```

c)

```
def example3(lst):  
    print(lst[0])  
    midpoint = len(lst)/2  
    for val in lst[:midpoint]:  
        print(val)  
    for x in range(10):  
        print("number")
```

d)

```
def example4(items):  
    for i in range(5):  
        print("Python is awesome")  
    for item in items:  
        print(item)  
    for item in items:  
        print(item)  
    print("Big O")  
    print("Big O")  
    print("Big O")
```

e)

```
def example5(num, items):  
    for item in items:  
        if item == num:  
            return True  
    else:  
        pass
```

f)

```
def example6(number):  
    if number <= 1:  
        return number  
    return (example6(number-1) + example6(number-2))
```