

- 1) Re-write expression  $7*(2+5)-3*(6-7)$  in postfix notation

**Answer:**  $725+*367-*-$

- 2) Re-write the expression  $32573-+*-$  (it is in postfix notation) in infix notation (common way)

**Answer:**  $3-2*(5+(7-3))$

**comment:** we start with  $7-3$ , then we do  $5+(7-3)$ , then  $2*(5+(7-3))$ , and finally  $3-2*(5+(7-3))$

- 3) # unittesting Stack.py's push and size methods

```
from Stack import *
import unittest
```

```
class Tests(unittest.TestCase):
```

```
    def testPush(self):
```

```
        """ tests push method by putting a value into a stack,
            and retrieving it """
```

```
        testvalue = 23
        mystack = Stack()
        mystack.push(testvalue)
```

```
        self.assertEqual(mystack.pop(), testvalue)
```

```
    def testSize(self):
```

```
        """ test the size method by putting values from the sequence
            into a stack, and verifying the size of the stack with
            the length of the sequence """
```

```
        teststackseq = [11,22,33,44,55,66,77,88,99] # length is 9
        mystack = Stack()
```

```
        for i in range(len(teststackseq)):
            mystack.push(teststackseq[i])
```

```
        self.assertEqual(mystack.size(), len(teststackseq))
```

```
unittest.main()
```