

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

Answer: $725+*367-*-$

- 2) Re-write the expression $3-2*(5+(7-3))$ (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()
```