

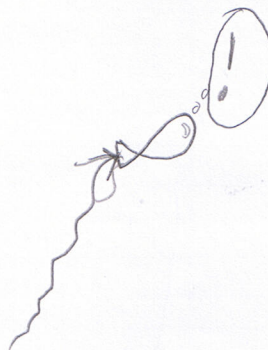
Cmp 388

①

9.8.09

$$2 + 3 * 4 + 3 + 7$$

$$2 + 3 * 4 + 10 \quad \text{or have not changed the meaning}$$



ex

$$\frac{\text{Index}}{2 + 3 * 4}$$

Postfix

$$234 * +$$

ex

$$\frac{\text{Index}}{1 + 2 + 2 * 3 - 5 * 3 + 1 + 2}$$

$$1 + 2 + 2 * 3 - 5 * 3 + 1 + 2$$

(-3)

Postfix

$$1 \quad 2 \quad + \quad 2 \quad 3 \quad * \quad + \quad 5 \quad 3 \quad * \quad - \quad 1 \quad + \quad 2 \quad +$$

$$3 \quad 2 \quad * \quad + \quad 5 \quad 3 \quad * \quad - \quad 1 \quad + \quad 2 \quad +$$

$$3 \quad 6 \quad * \quad 5 \quad 3 \quad * \quad - \quad 1 \quad + \quad 2 \quad +$$

$$9 \quad 5 \quad 3 \quad * \quad - \quad 1 \quad + \quad 2 \quad +$$

$$9 \quad 15 \quad - \quad 1 \quad + \quad 2 \quad +$$

$$-6 \quad 1 \quad + \quad 2 \quad +$$

$$-5 \quad 2 \quad +$$

(-3)

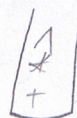
ex

$$\frac{\text{Index}}{1 + 2 + 2 * 3 - 5 * 3 + 1 + 2}$$

$$1 + 2 + 2 * 3 - 5 * 3 + 1 + 2$$



i8



Postfix

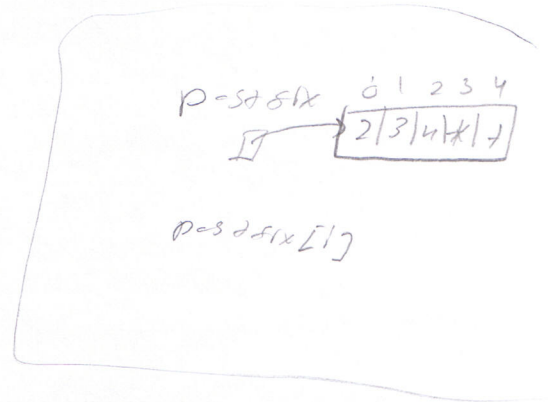
$$1 \quad 2 \quad + \quad 2 \quad 3 \quad * \quad + \quad 5 \quad 3 \quad * \quad - \quad 1 \quad + \quad 2 \quad + \quad \wedge \quad * \quad +$$

CMP 388

(2)
9.08.09

```

public class EvalInfix {
    public int evalPostfix(String postfix) {
        Stack stack = new Stack();
        for (int i = 0; i < postfix.length(); i++)
    
```



```

        char c = postfix.charAt(i);
        if ((c == '1') || (c == '2') || (c == '3') || (c == '4') || (c == 'x')) {
            int b = stack.pop();
            int a = stack.pop();

            if (c == '1') stack.push(power(a, b));
            if (c == '2') stack.push(a * b);
            if (c == '3') stack.push(a / b);
            if (c == '4') stack.push(a + b);
            if (c == 'x') stack.push(a - b);
        }
    
```

0 - 1138
1 - 1131 '4' - '0' = 4
2 - 1140
3 - 1141
etc

```

    public int power (int base, int exp) {
        int result = base;
        for (int i = 1; i < exp; i++)
            result = base * result;
        return result;
    }
    
```

```

        } else {
            stack.push(c - '0');
        }
    }
    return stack.top();
    
```