

Programming Assignment 2 (Expression Evaluation)

Test Cases

makeVariableLists (20 pts)

| | Input Expression | Points |
|----|------------------|--------|
| 1 | 25 | 1 |
| 2 | abc | 1 |
| 3 | xy[15] | 1 |
| 4 | P[q[10]] | 2 |
| 5 | m[n[X[5]]] | 2 |
| 6 | B+B | 2 |
| 7 | y+Y-z+R | 2 |
| 8 | (a-(b+c)*d)/2 | 3 |
| 9 | b*(c/a)+z*a | 3 |
| 10 | (ab*3/defg) | 3 |

evaluate (60 pts)

p 2
x 3
y 4
z 8
C 5 (1,1) (2,2) (3,3) (4,4)
D 6 (1,1) (3,3) (4,4) (5,5)
ARRY 3 (1,1) (2,2)

| | Input Expression | Value | Points |
|----|---------------------------|-------|--------|
| 1 | 255 | 255 | 2 |
| 2 | 3+47 | 50 | 2 |
| 3 | 13-4-12 | -3 | 2 |
| 4 | 150+14*15 | 360 | 2 |
| 5 | x | 3 | 2 |
| 6 | p/y | 0.5 | 2 |
| 7 | p-x+y | 3 | 2 |
| 8 | p-x*z/p+y-4 | -10 | 4 |
| 9 | (p) | 2 | 2 |
| 10 | p-(x-y) | 3 | 4 |
| 11 | p-((x-y)) | 3 | 4 |
| 12 | p-(x-y)*(2-z)+y | 0 | 4 |
| 13 | C[1] | 1 | 2 |
| 14 | C[x-2] | 1 | 3 |
| 15 | C[(z-y)] | 4 | 4 |
| 16 | C[3]+D[4] | 7 | 4 |
| 17 | C[D[0]] | 0 | 4 |
| 18 | z*(y-D[p+ARRY[1]-C[1]+x]) | -8 | 6 |
| 19 | C[D[ARRY[2]*2]]/2 | 2 | 5 |