

# Programming Assignment 2 (Expression Evaluation)

## Test Cases

**makeVariableLists** (20 pts)

	Input Expression	Points
1	<b>3</b>	1
2	<b>a</b>	1
3	<b>a[3]</b>	1
4	<b>a[b[3]]</b>	2
5	<b>A[A[3]]</b>	2
6	<b>a+a</b>	2
7	<b>a+A</b>	2
8	<b>(a-(b+c)*d)/2</b>	3
9	<b>b*c/a+z*a</b>	3
10	<b>ab*3/abc</b>	3

**evaluate** (60 pts)

a 2  
b 3  
c 4  
d 8  
A 5 (1,1) (2,2) (3,3) (4,4)  
B 6 (1,1) (3,3) (4,4) (5,5)  
CARR 2 (0,1) (1,2)

	Input Expression	Value	Points
1	<b>3</b>	3	2
2	<b>3+4</b>	7	2
3	<b>3-4-5</b>	-6	2
4	<b>3+4*5</b>	23	2
5	<b>b</b>	3	2
6	<b>a/c</b>	0.5	2
7	<b>a-b+c</b>	3	2
8	<b>a-b*d/a+c-4</b>	-10	4
9	<b>(a)</b>	2	2
10	<b>a-(b-c)</b>	3	4
11	<b>a-((b-c))</b>	3	4
12	<b>a-(b-c)*(2-d)+c</b>	0	4
13	<b>A[1]</b>	1	2
14	<b>A[b-2]</b>	1	3
15	<b>A[(d-c)]</b>	4	4
16	<b>A[3]+B[4]</b>	7	4
17	<b>A[B[0]]</b>	0	4
18	<b>d*(c-B[a+CARR[0]-A[1]+b])</b>	-8	6
19	<b>A[B[CARR[1]*2]]/2</b>	2	5