

```
<< ecastest`ecastest`
```

```
EcasTestSymbolic["/tmp/ecas", 200, True, False]
```

## Ecas Symbolic Test on Evaluation

Verbose Test started at 2006-12-16 23:18:39.912156

### ■ Test: 0

Test Input:

```
d*2*2*4*d*c*1*1+0+2+d+0+b+4+2+d+4+1+c+d+c+a+1+12*1*1*d*
d*0*1*d*2*b+e*2*b*d*c*c*4*0*0*4+c*0*12*4*c*c*1*2*
e*0*c*c*a+d*0*e*e+12+b*b*d*c*1*b*e*b*1*a*b*c*1*1+
e+12*2+1+2+b+d+4+a+4+e+b+c+e+1+2+c*12*0*b*4*b*2*4*2
```

Test Result:  $64 + 2*a + 4*b + 3*c + 4*d + 3*e + 16*c*d^2 + a*b^4*c^2*d*e$

*Mathematica:*

```
64 + 2*a + 4*b + 3*c + 4*d + 16*c*d^2 + 3*e + a*b^4*c^2*d*e
```

Test passed

### ■ Test: 1

Test Input:

```
a+12+1+2*d+1+a+e+b+a+b+a+a+b+1*2*2*a*2*4*2*2+0+12+b+d+c+
0*e*4*0+a+c+e+e+0+0+a+0+c*c+2+d+c+4+c+1+b+a*1+d+12+c+
12+0+4+2*b+12+d+c+e+12*12*a*d*12*2*4*1*0*0+a*a*2*1*b
```

Test Result:  $73 + c^2 + 136*a + 7*b + 6*c + 6*d + 4*e + 2*a^2*b$

*Mathematica:*

```
73 + 136*a + 7*b + 2*a^2*b + 6*c + c^2 + 6*d + 4*e
```

Test passed

### ■ Test: 2

Test Input:

```
e*b*e*b*a*1*12*d*e+12+2+c+b+a+1+0+2+b+c+e+4+c+e+e*d*c*
e*1*c+4+2+0+1*e*a*12*1*1*1+c*b*4*e*12*b*c*0*e*2
```

Test Result:  $27 + a + 2*b + 3*c + 2*e + 12*a*e + c^2*d*e^2 + 12*a*b^2*d*e^3$

```
Mathematica: 27 + a + 2*b + 3*c +
2*e + 12*a*e + c^2*d*e^2 + 12*a*b^2*d*e^3
```

Test passed

■ Test: 3

```
Test Input:
e*1*1*12*2*b*2*4*0+4+e+0*12*b*b*a*12*a*d*d*1*4+0+2+e+a+4+c+a+1+
e*12*d+e+12+a+0+a+c*1+e+12+b+12+4*c+2+d+b+e+c+12+1+c*e*d*a*
1*0*12*4*e*2*d*4*b*0*1+4+c+c+1+b+b*2+2+d+e+0+1+4+a+0+e*0*
12*d*2+e*2*12*0*2*0+e*2*e*12*1*1*b+e+c+0+d+e*4*4*0*c*0+12*
e*d*c*1+12*a*d+b*2*0*e*d*2*0*e*b*4*12*c+2+4+e+c+e+1+1+e+b+0
```

```
Test Result:
82+5*a+6*b+11*c+3*d+10*e+12*a*d+12*d*e+12*c*d*e+24*b*e^2
```

```
Mathematica: 82 + 5*a + 6*b + 11*c + 3*d +
12*a*d + 10*e + 12*d*e + 12*c*d*e + 24*b*e^2
```

Test passed

■ Test: 4

```
Test Input:
e+1+b+1+12+d+12+2+1+2*4+c+d+1+e+d*12*1+0*c*0*d*12*4*12*
e*d*4*0+4+4+e*12*1*4*2*2*1*0*12*c*4*4*a*c+1+0+e
```

```
Test Result: 47+b+c+14*d+3*e
```

```
Mathematica: 47 + b + c + 14*d + 3*e
```

Test passed

■ Test: 5

```
Test Input:
1*b*b*e*2*0*4*1*2*4*b*b+1+e+a+d+2+e+1+2*a+b+c+e+b+a*c+a+
1+1+1+a*4*c*b*d*4*2*c*b*d+e*e*d*2*12*12+12+c+4+d+c+d+
1+d*2*c*d*a*a*c*0*2*0*4*1+d+d+12+12+c+e+1*4*d*1*b*1+e+
4+2+0+a+c+0+b+b+0*c*c*4*d*b*c*1*4*c*2*a*2*12+2+4+2+1+
d*a*c*e*12*1*b*b*b*d*12*12+c*12*0*c*1*a*d*2*d+c+1+e+e+
e+b+d+c*d*b*12*b*12*0*1+4+12+12+12+2+12*1*12*2*4+d+0+
2+a+c*0*a*0*12*0*b+4+4+a+4+e*d+0+d*0*1+a+0+a+2*a+e+d+a
```

```
Test Result: 1272+12*a+5*b+6*c+9*d+9*e+a*c+4*b*
d+d*e+288*d*e^2+32*a*b^2*c^2*d^2+1728*a*b^3*c*d^2*e
```

*Mathematica:*  $1272 + 12*a + 5*b + 6*c + a*c + 9*d + 4*b*d + 32*a*b^2*c^2*d^2 + 9*e + d*e + 1728*a*b^3*c*d^2*e + 288*d*e^2$

Test passed

■ Test: 6

Test Input:  $d+2*4+e+0+1+b+e+1+1+c+d+2*12*4*12*a*b*e*4*12$

Test Result:  $11+b+c+2*d+2*e+55296*a*b*e$

*Mathematica:*  $11 + b + c + 2*d + 2*e + 55296*a*b*e$

Test passed

■ Test: 7

Test Input:  
 $12*b*b*4*2*d*e*d*b*c*1*a*a+2+b+b+a*12*e*b*2*d*e+0+4+1+4+b+b+d+2*a+e+12+b+4+4+a+e+2+a*b*c*2*e*a+b+2+e+e+0+4+4+d+2+c+c+a+a+d+d+e+1*b*4*b*d*4*a*b*e+1+0+12+0+4+0+0+1+a+b+2+2+b+0+2*e*a*1*e*a*b*0*d*1*b*d*e*4*1*0*2+e+c+a+e+d+4+12*c+e+a+1+1*b+1+4+b+c*b*a*e*4+1+d+a+d+d+1+12+1+4+d+d+e+d+1*e*d*1*12*1*c*12*b*2+0+2+0+4+12*a*a*b*1*b*0*a*c*1*a*12*1*4*4*2*0*4$

Test Result:  
 $102+9*a+10*b+15*c+11*d+9*e+4*a*b*c*e+288*b*c*d*e+2*a^2*b*c*e+24*a*b*d*e^2+16*a*b^3*d*e+96*a^2*b^3*c*d^2*e$

*Mathematica:*  $102 + 9*a + 10*b + 15*c + 11*d + 9*e + 4*a*b*c*e + 2*a^2*b*c*e + 16*a*b^3*d*e + 288*b*c*d*e + 96*a^2*b^3*c*d^2*e + 24*a*b*d*e^2$

Test passed

■ Test: 8

Test Input:  $b+0+1+12+a+c+4+c+d+4*c*b*4*0*a*2$

Test Result:  $17+a+b+d+2*c$

*Mathematica:*  $17 + a + b + 2*c + d$

Test passed

■ Test: 9

Test Input:  
 $a^2 \cdot 0 + 2 \cdot 1 \cdot b \cdot e + 12 \cdot d + b \cdot a + 2 + 1 + 4 + e + 2 + c \cdot 12 + c + 0 + 0 + a + 1 + 1 + e + d + c + 4 + c + e \cdot 0 \cdot 4 \cdot d + 4 + 2 + a + 12 + 1 + b + 4 + 1 + 2 + 12 \cdot 2 \cdot c \cdot 0 \cdot b \cdot b \cdot b + d + e + 12 + 1 \cdot b + 0 + d + 12 + b \cdot e + 0 + b + e + c + c + c \cdot 2 \cdot b \cdot a \cdot 2 \cdot b \cdot 2 \cdot e + 1 \cdot c \cdot c \cdot b \cdot 2 \cdot 4 \cdot 4 \cdot 0 \cdot 12 + a \cdot 2 \cdot d \cdot d \cdot e \cdot e \cdot b \cdot d \cdot b \cdot 0 \cdot 1 \cdot 12 \cdot b \cdot a \cdot a \cdot a \cdot 0 \cdot b \cdot e \cdot e + e + a + 2 + 1 + 4 + 1 \cdot a + a + e + 1 + a + a + c + 1 + 4 + e + 0 + 12 + e \cdot 0 \cdot d \cdot 4 \cdot 2 \cdot 2 \cdot c \cdot 4 \cdot 2 \cdot d \cdot d + 2 + a + 12 + e + 12 + e + 12 + e + 12 \cdot 2 \cdot c \cdot 0 \cdot 12 \cdot 12 \cdot 0 \cdot d \cdot 0 \cdot 2 \cdot 0 \cdot a \cdot e \cdot 2 \cdot 0 \cdot a \cdot e \cdot 0 \cdot 12 \cdot e \cdot d$

Test Result:  $140 + 9 \cdot a + 4 \cdot b + 18 \cdot c + 4 \cdot d + 10 \cdot e + 3 \cdot b \cdot e$

*Mathematica*:  $140 + 9 \cdot a + 4 \cdot b + 18 \cdot c + 4 \cdot d + 10 \cdot e + 3 \cdot b \cdot e$

Test passed

■ Test: 10

Test Input:  
 $e + 2 + b + 12 + c + 4 + 2 + 2 \cdot 0 \cdot 1 \cdot 1 \cdot 4 \cdot c \cdot e \cdot 2 \cdot a + 2 \cdot 2 \cdot 1 + 12 \cdot 1 \cdot b \cdot c + a \cdot b \cdot d \cdot 12 \cdot 12 + c \cdot a \cdot e \cdot c \cdot 4 \cdot 2 \cdot d \cdot d \cdot 0 \cdot c \cdot 2 \cdot 2 \cdot b \cdot 0 \cdot 4 + 4 + 2 + b + 0 + e + a + a \cdot 12 + a \cdot a \cdot e + e \cdot c \cdot 2 \cdot 12 \cdot 4 \cdot 12 \cdot d \cdot 4 + e + b + d$

Test Result:  
 $30 + c + d + 13 \cdot a + 3 \cdot b + 3 \cdot e + 12 \cdot b \cdot c + a^2 \cdot e + 144 \cdot a \cdot b \cdot d + 4608 \cdot c \cdot d \cdot e$

*Mathematica*:  $30 + 13 \cdot a + 3 \cdot b + c + 12 \cdot b \cdot c + d + 144 \cdot a \cdot b \cdot d + 3 \cdot e + a^2 \cdot e + 4608 \cdot c \cdot d \cdot e$

Test passed

■ Test: 11

Test Input:  
 $c \cdot a \cdot 0 \cdot 2 \cdot 4 \cdot 4 \cdot c \cdot a \cdot 4 \cdot b \cdot 2 + 0 + 4 + 12 + b + 12 + 1 + d + d \cdot 12 \cdot a \cdot 12 \cdot 0 \cdot 12 + d + d + 12 + c + 1 + e + 0 \cdot a + 0 + d + 1 + d + c \cdot 2 + 4 + 4 + 12 + 12 + b + c \cdot e \cdot c \cdot e \cdot d \cdot 0 \cdot 2 + 2 \cdot 12 \cdot b \cdot e \cdot b \cdot c \cdot 0 \cdot 0 \cdot 1 \cdot 2 \cdot 0 \cdot b \cdot b \cdot a \cdot a \cdot 0 \cdot 2 \cdot b \cdot 4 \cdot 2 + c \cdot d \cdot b \cdot c + c + b + a \cdot 12 + 0 + d + c + a \cdot 4 \cdot 0 \cdot 12 \cdot 2 \cdot b \cdot d \cdot 1 \cdot 4 \cdot 12 \cdot 1 \cdot 0 + 4 \cdot 1 \cdot 4 \cdot 4 \cdot b \cdot 0 \cdot c \cdot 4 \cdot c \cdot c + b \cdot 4 \cdot 1 \cdot c \cdot d \cdot e \cdot d + 4 + 1 \cdot 0 \cdot a \cdot e \cdot b \cdot d \cdot b \cdot 1 \cdot d + 12 \cdot d \cdot 4 \cdot 2 \cdot a \cdot 12 \cdot a + 2 + d + a + 2 + 1 + 4 + b \cdot e \cdot e \cdot 4 \cdot 1 \cdot 0 \cdot d \cdot e \cdot 1 \cdot 4 \cdot e + 2 \cdot 12 \cdot d \cdot 0 \cdot 12$

Test Result:  $88 + e + 13 \cdot a + 3 \cdot b + 5 \cdot c + 7 \cdot d + 1152 \cdot a^2 \cdot d + b \cdot c^2 \cdot d + 4 \cdot b \cdot c \cdot d^2 \cdot e$

*Mathematica*:  $88 + 13 \cdot a + 3 \cdot b + 5 \cdot c + 7 \cdot d + 1152 \cdot a^2 \cdot d + b \cdot c^2 \cdot d + e + 4 \cdot b \cdot c \cdot d^2 \cdot e$

Test passed

■ Test: 12

Test Input:  $d \cdot 2 \cdot 4 \cdot e \cdot a \cdot 1 \cdot b \cdot b \cdot e \cdot 12 \cdot 2 \cdot a \cdot 12 \cdot 4 \cdot a \cdot 0 \cdot c \cdot 12 \cdot 0 \cdot 2 \cdot 4 \cdot b \cdot 4 \cdot d \cdot e \cdot 1 \cdot a \cdot 4 \cdot c \cdot 1 \cdot e \cdot 0 \cdot e \cdot 4 \cdot d \cdot 4 \cdot 4 \cdot e \cdot 12 \cdot a \cdot 1 \cdot 2 \cdot c$

Test Result:  $20 + a + c + d + 14 \cdot e + 128 \cdot a \cdot b \cdot c \cdot d \cdot e + 2304 \cdot a^2 \cdot b^2 \cdot d \cdot e^2$

*Mathematica:*  
 $20 + a + c + d + 14 \cdot e + 128 \cdot a \cdot b \cdot c \cdot d \cdot e + 2304 \cdot a^2 \cdot b^2 \cdot d \cdot e^2$

Test passed

■ Test: 13

Test Input:  $d + 0 + 1 + c + 2 \cdot c \cdot e \cdot 1 \cdot e \cdot 12 \cdot 4 \cdot a \cdot 4 \cdot 0 \cdot 1 \cdot 4 \cdot a \cdot 12 \cdot b \cdot 2 \cdot 1 \cdot 2 \cdot 0 \cdot 2 \cdot 0 \cdot 0 \cdot 1 \cdot 4 \cdot 1 + 12 \cdot d + c + 1 \cdot b \cdot c \cdot 2 \cdot 1 \cdot d + c + e + e + c + d + 0 + c + 12 + 4 \cdot 1 + c + 1 + 12 + b + c + 12 \cdot 1 \cdot 0 \cdot d \cdot a \cdot a \cdot d \cdot a \cdot e \cdot 0 \cdot d \cdot c \cdot 2 \cdot a \cdot 12 \cdot c + d + e + a + c + b \cdot b + d + d + 0 + 4 + 12 \cdot e \cdot 4 \cdot 1 \cdot c \cdot 1 \cdot b \cdot e + c + 0 + 0 + 12 + c + a + 2 + c + 12 + e + 2 + 2 + a + e + 12 + c + d + 0 \cdot a \cdot c \cdot 12 \cdot d \cdot e \cdot d \cdot b \cdot 4 \cdot 4 \cdot d + c + 12 + 12 + 12 + 4 + 1 + b + 4 + 0$

Test Result:  $121 + b^2 + 3 \cdot a + 2 \cdot b + 13 \cdot c + 18 \cdot d + 5 \cdot e + 2 \cdot b \cdot c \cdot d + 48 \cdot b \cdot c \cdot e^2$

*Mathematica:*  $121 + 3 \cdot a + 2 \cdot b + b^2 + 13 \cdot c + 18 \cdot d + 2 \cdot b \cdot c \cdot d + 5 \cdot e + 48 \cdot b \cdot c \cdot e^2$

Test passed

■ Test: 14

Test Input:  $0 + 2 + 1 + 1 + 1 \cdot 1 \cdot a \cdot e \cdot a \cdot 4 \cdot 2 \cdot b \cdot 4 \cdot 2 \cdot 0 \cdot c \cdot 1 \cdot c \cdot 1 \cdot b \cdot c \cdot d \cdot e \cdot e + 0 + d + e + b + a + 1 + 1 + 4 + c + d \cdot 2 \cdot c \cdot 4 + e + 0 + 4 + 2 + b + c + 0 + 1 + 1 \cdot d + 1 + 2 \cdot 2 \cdot d \cdot a \cdot e \cdot 4 \cdot 2 \cdot 0 \cdot b \cdot e \cdot e + 1 + 12 + c + 0 + e + b + e \cdot c + 4 + 2 + c \cdot 12 + 1 + a + 1 \cdot 4 + c + 2 + c + c + 12 \cdot 1 \cdot a \cdot 4 \cdot 1 \cdot e \cdot 1 \cdot 2 \cdot 12 + 2 \cdot 0 \cdot d \cdot b \cdot d + c \cdot 12 \cdot 4 + b \cdot 1 \cdot d \cdot 12 \cdot 2 \cdot 0 \cdot 2 \cdot a \cdot e \cdot 1 \cdot e \cdot a \cdot 4 \cdot 1 \cdot a \cdot 0 \cdot a \cdot e \cdot b \cdot c$

Test Result:  $44 + 2 \cdot a + 3 \cdot b + 66 \cdot c + 2 \cdot d + 3 \cdot e + 1152 \cdot a \cdot e + 8 \cdot c \cdot d \cdot c \cdot e$

*Mathematica:*  
 $44 + 2 \cdot a + 3 \cdot b + 66 \cdot c + 2 \cdot d + 8 \cdot c \cdot d + 3 \cdot e + 1152 \cdot a \cdot e + c \cdot e$

Test passed

■ Test: 15

Test Input:

```
2+a+c+e+a+e*4*c*4*1*1*c*0*e*e*12+2+1+b+2*1*e*d*b*0*1*b*
a+12+1+a+c+4+12+2*c+d+12+4+e+4+b+2*12*0*a*c*b*2*2+b+
d+d+4+b+12+c+0+c+12+d+4*2+a+b+e+a*e*d*a+a*c*0*1*0*d*
0+e+b+12+0+c+e+0+e+12*1*4*1*a*4*1+4+b+d+12+2+e+b+12+
b+e+e*c*c*1*a*0*d*12*2*c*1*12*e*a*b*12*0+a*e*e*1*b*1
```

Test Result:  $132+196*a+9*b+7*c+5*d+8*e+a^2*d*e+a*b*e^2$

Mathematica:

```
132 + 196 * a + 9 * b + 7 * c + 5 * d + 8 * e + a ^ 2 * d * e + a * b * e ^ 2
```

Test passed

■ Test: 16

Test Input:

```
b+1+1+e+b+4+b*2+2+4+0+a+e*e+4+12+e+4+12+d+1+a+d+0*1*b*
b*d*1+1*1*d*b*4*1*c*4+12+0+d+a+0+4+c+12+e+12
```

Test Result:  $85+c+e^2+3*a+4*b+3*d+3*e+16*b*c*d$

Mathematica:  $85 + 3 * a + 4 * b + c + 3 * d + 16 * b * c * d + 3 * e + e ^ 2$

Test passed

■ Test: 17

Test Input:

```
a+4+e+4+b+c+e+1+1*d*12*12*1*2*2*e*d*0*2*c*d*1*4*4*0+a+12+c+4+
0+0*4+12+1+b+12+c+a+e+1+0*1*2*d*12*d*e*2*2+e+4+c+d+d+12+
2+12*0*c*2*1*12*0*e*c*c+a*1*0+b+2+c+12+d+c+a+12+a*b+4+d+
b+12+4+2*a*1*e*12*4*0*e*d+a+1*d*1*d*2+c+1+c+12+a+a+12*d*
0*e*1*2*d*2*b*a*c*1+c+2+12+1*12*0*2*12*1*1+a+4*0+c+4+0+d+
0+c+b+d+d*0+2+a+e+a+1+4*a*b*12*d+c+0+4+12+2+d+12+2+0+e*
2*12*12*c+e+12+2+1+2+1+b+2+d+b+b*c*c+c+a+1+b+4+1+c+2+12
```

Test Result:

$221+c^2+11*a+9*b+14*c+8*d+6*e+a*b+288*c*e+2*d^2+48*a*b*d$

Mathematica:

```
221 + 11 * a + 9 * b + a * b + 14 * c +
c ^ 2 + 8 * d + 48 * a * b * d + 2 * d ^ 2 + 6 * e + 288 * c * e
```

Test passed

■ Test: 18

Test Input:

```
2*1*a*a*d+4*a*d*2*12*12+c*12*4*2*d*e*d*12*b*d*e*d*c*c*c*
0+d+2+e+c+4+1+a+12*12*e*1*b*0*a+1+c+d+12+d+2+d*d*c*12+
e*4*e*2*e+a+c+e+0+12+12+d+4+4+2+c*e*e*d*12*c*1*a*0*1*
2*12*b+a+12+4+12+1+d+4+d*1*0*1*2*0*12*d*12*1+12+d+
b+1+12+0*12*d*c*c*b*c*0+b+a+1+c+2+a+4+b+b*b*1+12*c*d+
12+2+0+c+12+c+a*1*c*a*e*b*0*b*4+e+e+d+d+4+0+e+b*a+12+e
```

Test Result: 162+5\*a+3\*b+6\*c+8\*d+6\*e+

a\*b+b^2+1152\*a\*d+12\*c\*d+2\*a^2\*d+12\*c\*d^2+8\*e^3

*Mathematica:* 162 + 5\*a + 3\*b + a\*b + b^2 + 6\*c + 8\*d +  
1152\*a\*d + 2\*a^2\*d + 12\*c\*d + 12\*c\*d^2 + 6\*e + 8\*e^3

Test passed

■ Test: 19

Test Input:

```
e*2*b*d*d*a*b+d+d+1+4+12+e+4*2*b*c*a+e+12*d*a+2*12*12*
d*d+4+0+d*2*b*c+4+12+e+4+e+0+b*4+c+e+12+0*e*
b*0*c*4*b*2*12*1+b+0+0+2+12+12+b
```

Test Result:

79+c+6\*b+2\*d+4\*e+2\*b\*c\*d+2\*a\*b^2\*d^2\*e+27648\*a^2\*b\*c\*d^3\*e

*Mathematica:* 79 + 6\*b + c + 2\*d + 2\*b\*c\*d +  
4\*e + 2\*a\*b^2\*d^2\*e + 27648\*a^2\*b\*c\*d^3\*e

Test passed

■ Test: 20

Test Input:

```
d+12+4+1+0+12+b+a*1+12+4+d+a*0*1*c*0*4*e*12*a+c+a+1+d+12+2*4*e*
12*0*12*12*a*12*4*b+12+e+c+a+4+c+12+1+0+12+0+e*d*d*2*d*0*0*
e*e*2+b+b+a+2+a+2+d*4*c*b*0*0*0*e*0*e+b+12+e+a+e+2+2+c+d+
e*c*d*e*e*4*a*c*c+4*2*d+b+a+d+c+a*b*4+d+1+e+d*e*4*c*b*12*
e*12+d+a+c+0+0+12+a+a+0*0*e*12*d*e*b*12*d*2+4+4+e+d+e+a+
b+d+a+d*1+b+c+e+c+1*e*e*2*a*1*c*0*d*d*1*d+0+2+0+2+d+c+2+0
```

Test Result:

146+12\*a+7\*b+9\*c+19\*d+7\*e+4\*a\*b+576\*b\*c\*d\*e^2+4\*a\*c^3\*d\*e^3

*Mathematica:* 146 + 12\*a + 7\*b + 4\*a\*b + 9\*c +  
19\*d + 7\*e + 576\*b\*c\*d\*e^2 + 4\*a\*c^3\*d\*e^3

Test passed

■ Test: 21

Test Input:  $a \cdot 0 \cdot c \cdot 2 \cdot a \cdot 0 \cdot a \cdot e \cdot d \cdot 4 \cdot b + 0 + c + d + b + 4 + 4 + b + b \cdot a \cdot a \cdot c \cdot 12 \cdot 2 + d + 12 + 0 + 0 + b + d + e \cdot 2 + 2 + c + b + a + c + 2 + 1 + 1 + e + 2 + b + 12 + b + 4 + a$

Test Result:  $44 + 2 \cdot a + 6 \cdot b + 3 \cdot c + 3 \cdot d + 3 \cdot e + 24 \cdot a^2 \cdot b \cdot c$

*Mathematica*:  $44 + 2 \cdot a + 6 \cdot b + 3 \cdot c + 24 \cdot a^2 \cdot b \cdot c + 3 \cdot d + 3 \cdot e$

Test passed

■ Test: 22

Test Input:  $c + 0 + 2 + e + a + b + c + 1 + a + c \cdot c \cdot b \cdot c + 0 + d + a + 2 + d + 1 + 1$

Test Result:  $7 + b + e + 3 \cdot a + 2 \cdot c + 2 \cdot d + b \cdot c^3$

*Mathematica*:  $7 + 3 \cdot a + b + 2 \cdot c + b \cdot c^3 + 2 \cdot d + e$

Test passed

■ Test: 23

Test Input:  $e + 4 + a + e + a + e + d + a + b \cdot 1 \cdot 2 + 4 + d + 12$

Test Result:  $20 + 3 \cdot a + 2 \cdot b + 2 \cdot d + 3 \cdot e$

*Mathematica*:  $20 + 3 \cdot a + 2 \cdot b + 2 \cdot d + 3 \cdot e$

Test passed

■ Test: 24

Test Input:  
 $12 + 12 + 0 + 1 + d + 0 \cdot 4 \cdot 12 \cdot 4 \cdot b + c + 2 + a + a + d + 4 + 12 + 12 + c + c + a + 12 + 0 + 12 + d + 4 + 0 + d \cdot 2 \cdot a \cdot 12 + b \cdot 0 \cdot 0 \cdot 1 \cdot 1 \cdot 12 \cdot c + 2 + 1 + 0 + c + 4 + c + b + d + c + 0 + b + d + 12 + 0 + c + a + a + 2 \cdot 0 \cdot d \cdot 1 \cdot d \cdot d \cdot a \cdot 2 \cdot d \cdot a + a + e + 12 + a + 12 + a \cdot a \cdot b \cdot a \cdot d \cdot a \cdot 2 \cdot d \cdot a \cdot d \cdot d \cdot e \cdot 12 \cdot c \cdot 2 \cdot 1 \cdot a \cdot 12 \cdot 2 \cdot d \cdot b \cdot 4 \cdot c \cdot c \cdot 1 \cdot b \cdot 2 + b + c + b + 12 + 12 + 1 + 0 + b + 0 + b + d + 1 + c + b + b + 1 \cdot 0 \cdot 0 \cdot 12 \cdot 0 \cdot 2 + b + 12 + 2 + b + 2 + d + e + c + d + b \cdot c \cdot c \cdot e \cdot 4 \cdot 2 \cdot 2 \cdot 1 \cdot c \cdot d + c + 1 + 2 + d + 12 \cdot e \cdot 1 \cdot b \cdot 1 \cdot b + 4 + c + 12 + d + 1 + 12 + 4 + 1 + c + 1 \cdot 12 + a \cdot b \cdot 12 \cdot a \cdot d \cdot 2 \cdot a \cdot b \cdot a \cdot 12 + 4 + 0 + b \cdot d \cdot e \cdot e + a \cdot d \cdot a \cdot d \cdot 4 \cdot d \cdot e \cdot d \cdot c \cdot 0$

Test Result:  
 $221 + 7 \cdot a + 10 \cdot b + 13 \cdot c + 10 \cdot d + 2 \cdot e + 24 \cdot a \cdot d + 12 \cdot b^2 \cdot e + b \cdot d \cdot e^2 + 16 \cdot b \cdot c^3 \cdot d \cdot e + 288 \cdot a^4 \cdot b^2 \cdot d + 9216 \cdot a^6 \cdot b^3 \cdot c^3 \cdot d^5 \cdot e$

Test passed

```
Mathematica: 221 + 7*a + 10*b + 13*c + 10*d +
24*a*d + 288*a^4*b^2*d + 2*e + 12*b^2*e +
16*b*c^3*d*e + 9216*a^6*b^3*c^3*d^5*e + b*d*e^2
```

Test passed

■ Test: 25

```
Test Input: a*d*4*d*4*b*12*a*2*4*b+0+0*1*1*0*0*a*c+d+a+
0+2+12+2+a+0+4*c*12*2*b*a*2*0*b+e*12*1+4*e*12*d*2*0*1
```

```
Test Result: 16+d+2*a+12*e+1536*a^2*b^2*d^2
```

```
Mathematica: 16 + 2*a + d + 1536*a^2*b^2*d^2 + 12*e
```

Test passed

■ Test: 26

```
Test Input: a*0*2*12*1*a*4*4*a*2+12+12*c*1*
4*0*2+b+b+d+4+2+4+c+12+0+0*2*d*12*4+12+4+4+b+d+2+2
```

```
Test Result: 58+c+3*b+2*d
```

```
Mathematica: 58 + 3*b + c + 2*d
```

Test passed

■ Test: 27

```
Test Input:
c+d+d+d+e+4+d+c*c+d+e+1*0+4+12+c+a+2+12+a+0+a*4*0*b*0*4*12*c*4*
b*2*4*a*e*0+2+c+a+d+c+a+c+12+d*b*b*12*d*4*d+0+b+1+2+12+4+12+
d+d+c+0+1+d+c+c+b+0+d+12+d+e*0+2*0*c*a*1*4*a*b*1*0+d*e*1*1*a*
a*1*0*b+b+2+c+c+e+1*c*12+1*4*e*12*e*1*1*e*2*c+c+1+4+0+c*a*e*a
```

```
Test Result:
99+c^2+4*a+3*b+23*c+11*d+3*e+a^2*c*e+96*c*e^3+48*b^2*d^3
```

```
Mathematica: 99 + 4*a + 3*b + 23*c + c^2 +
11*d + 48*b^2*d^3 + 3*e + a^2*c*e + 96*c*e^3
```

Test passed

■ Test: 28

Test Input:  $c \cdot e^{12} \cdot c \cdot e^{4 \cdot 2} \cdot c^{12} \cdot 0 \cdot 0 \cdot b \cdot d \cdot d \cdot c \cdot 0 + 12 + 4 + a \cdot 4 + b + b \cdot 1 \cdot 2 \cdot e \cdot 1 \cdot 4 + b \cdot d \cdot a \cdot 4 \cdot a + d + 2 + 0 + d + 1 + 12 + e + c \cdot b \cdot a \cdot e \cdot e^{12} \cdot 1 \cdot 0$

Test Result:  $31 + b + e + 4 \cdot a + 2 \cdot d + 8 \cdot b \cdot e + 4 \cdot a^2 \cdot b \cdot d$

*Mathematica:*  $31 + 4 \cdot a + b + 2 \cdot d + 4 \cdot a^2 \cdot b \cdot d + e + 8 \cdot b \cdot e$

Test passed

■ Test: 29

Test Input:  $b \cdot 1 \cdot a \cdot b \cdot a \cdot c \cdot 4 \cdot e \cdot a \cdot 2 \cdot 0 \cdot 0 \cdot 0 \cdot 4 \cdot 4 \cdot 0 + 12 + d + d + 1 + e \cdot e \cdot e \cdot 2 \cdot 1 + 4 + d + 0 + d \cdot 2 \cdot d \cdot e \cdot b \cdot c \cdot 1 \cdot a \cdot e \cdot 1 + a + 12 + 2 + a + e + d + c + 2 + b + b + 1 + 1 + 12$

Test Result:  $47 + c + e + 2 \cdot a + 2 \cdot b + 4 \cdot d + 2 \cdot e^3 + 2 \cdot a \cdot b \cdot c \cdot d^2 \cdot e^2$

*Mathematica:*  $47 + 2 \cdot a + 2 \cdot b + c + 4 \cdot d + e + 2 \cdot a \cdot b \cdot c \cdot d^2 \cdot e^2 + 2 \cdot e^3$

Test passed

■ Test: 30

Test Input:  $d + a + b + 4 + 0 + a + d + a \cdot 12 + b + 0 + 12 + e + 4 + d + d \cdot d + 0 + c + b + 1 + 0 \cdot 2 \cdot 0 + 4 + d + c + 0 + c + 4 + b + d + 1 + a + e + e + 2 + c + 1 \cdot e + 12 + 12 + 2 + 4 + 0 + a + 1 + b + a + b + d + 0 + 1$

Test Result:  $64 + d^2 + 17 \cdot a + 6 \cdot b + 4 \cdot c + 6 \cdot d + 4 \cdot e$

*Mathematica:*  $64 + 17 \cdot a + 6 \cdot b + 4 \cdot c + 6 \cdot d + d^2 + 4 \cdot e$

Test passed

■ Test: 31

Test Input:  $1 + 12 + b \cdot 4 \cdot c \cdot 4 \cdot c \cdot 4 \cdot 12 \cdot 4 \cdot c \cdot a \cdot 2 \cdot a \cdot a \cdot 4 + e + 12 + 4 + a + 0 + 2 \cdot 4 + 1 + 1 + 0 + d + c + 12 + 0 \cdot c + 1 + 1 + c + c + 1 + 2 + b \cdot 12 + c + c + a + b + b + 0 + 1 \cdot b + b \cdot e \cdot 1 \cdot a \cdot e \cdot a \cdot a \cdot a + 2 + d + 4 + 0 + c + a + d \cdot 1 \cdot 1 \cdot 2 \cdot d \cdot e \cdot c \cdot d \cdot 2 + b + 0 + 12 + 1 + c \cdot 4 \cdot d \cdot a + d + 0 + 1$

Test Result:  $76 + e + 3 \cdot a + 16 \cdot b + 6 \cdot c + 3 \cdot d + 4 \cdot a \cdot c \cdot d + 4 \cdot c \cdot d^3 \cdot e + 24576 \cdot a^3 \cdot b \cdot c^3 + a^4 \cdot b \cdot e^2$

Test passed

*Mathematica:*  $76 + 3*a + 16*b + 6*c + 24576*a^3*b*c^3 + 3*d + 4*a*c*d + e + 4*c*d^3*e + a^4*b*e^2$

Test passed

■ Test: 32

Test Input:

$b^2*b*a*d^2*c+a+a+e+12+4+c+1*d*a^2*4*0*e*b*0*c*c+c+a+c+4+12+c+0*a*d+d^4*d+4*d^2*2*12*a*e*e*c*b*d+a+12+c+b+a+d+1+e+c+c+2+4+4+c^2+0+e+2+12+0+d+c+d+e+c+a*a+c+12+a+c+0*1*2*d*d*d^4*d^12*a+1*b*b*1*0*b*e*e+e*4*12*b*0*c^2+e+12+b+2+a+a+4+c+2+4*1*d*e*0*12+d+c*d^4+a+1+2+1+2*e+c+a+d+2+d+e+4+e+12+b+1+0*a+12+b+0+a+c+b+b+4+2+0+e+a+2+0+e+b+a+a+e+0+12+2+1+b*2*1*e*b*d*1*c^2*b*b*2*a*d*1+4+c+a+1*c*e*b*c*1$

Test Result:  $163+a^2+15*a+7*b+18*c+10*d+12*e+4*d^2+b*c^2*e+4*a*b^2*c*d+192*a*b*c*d^2*e^2+8*a*b^4*c*d^2*e$

*Mathematica:*  $163 + 15*a + a^2 + 7*b + 18*c + 10*d + 4*a*b^2*c*d + 4*d^2 + 12*e + b*c^2*e + 8*a*b^4*c*d^2*e + 192*a*b*c*d^2*e^2$

Test passed

■ Test: 33

Test Input:

$c*c*a+e*c+e+12+c+a+1+12+0+c+c+d^4+e+0+0+d+1+c+12*1+2+0+4+1+c*0*c*12*c*d*a^2*4+4+e+0+e*0+12+4+e*12*12*2*1*d*a^2*c*b^2+1+12+d+d+e+4+a+2+c*1+4+4+4+12+e+2*4*c*e*12*4*a*e*12*b*0*e*12*12*1*0*c+4+0+a+c*1*d*0*1*0*4*1*b+e*c^2*b*b*1*c+c*d^12*a*e*b*4*4*4+2+a+12+e*d*c^2*4*2*c*c+d+a+d+b+1+a+1+12+b+d+c+0*e*2+e+d+1+d+d+12$

Test Result:  $153+6*a+2*b+6*c+13*d+6*e+c*e+a*c^2+2*b^2*c^2*e+1920*a*b*c*d*e+16*c^3*d*e$

*Mathematica:*  $153 + 6*a + 2*b + 6*c + a*c^2 + 13*d + 6*e + c*e + 2*b^2*c^2*e + 1920*a*b*c*d*e + 16*c^3*d*e$

Test passed

■ Test: 34

Test Input:

$4+e+4+4*a*0*e*12*c*b*a*0+1+c+12+12+d+4+4+0*0*4+4*0*b*e*0*1*e*d*1*12*b*e*4*12*e*b*a*12*a*12*4*b*12+a*12*e*0*1*b*12+2*d*b*2$

Test Result:  $41+c+d+e+4*b*d$

*Mathematica:*  $41 + c + d + 4 * b * d + e$

Test passed

■ Test: 35

Test Input:  
 $1+0+e+e+1+c+d+a*d+12+0+4+a+d+0*a*4*2*12*b*12*d*2*a*12*1$

Test Result:  $18+a+c+2*d+2*e+a*d$

*Mathematica:*  $18 + a + c + 2 * d + a * d + 2 * e$

Test passed

■ Test: 36

Test Input:  
 $0*4*2*b*d*e*c*1*1*a+1+c+4+2+12*12*4*c*a*12*c*b+12+1+4+d+d+a+0+1+c*b*e*e*4*4+d+e+c+4+2+0+1*0*0+a+12+2+e+c+d+0+a+e+2*1*b*4+4+2+4*4*2*2*1*2*2*e*2*12*4*b+c+12+a+d+0+12*d*1*1*b*4*a*c*c*2*e*4*12*e*c+4+e+a+0+c+b+4+12+2+b+e+2*4*b*d*4*12*a*1*a*e*12+a+c+e+a+b+12+a+4+4+d+b+d+b+d+12+e+0+a+b+2+1+b+2+1+0+1+1+12*e*1*1*2*1*4*b*1*a*b*b*e*4*c*12*e*0*e+2+4+1+0+0+d+b*c*c*e*12*c*a*4*c*0*e+d*4*b*4*2*a+4+a+b+d*1*0*1*4*b*d*4*e*c*0$

Test Result:  
 $136+10*a+16*b+6*c+9*d+7*e+24576*b*e+32*a*b*d+6912*a*b*c^2+16*b*c*e^2+4608*a^2*b*d*e+4608*a*b*c^3*d*e^2$

*Mathematica:*  $136 + 10 * a + 16 * b + 6 * c + 6912 * a * b * c^2 + 9 * d + 32 * a * b * d + 7 * e + 24576 * b * e + 4608 * a^2 * b * d * e + 16 * b * c * e^2 + 4608 * a * b * c^3 * d * e^2$

Test passed

■ Test: 37

Test Input:  
 $a+c+0+e+12+c+12+4+2+0+c*d*2*12*b*e*2*4*0*a+c+e+b+1+c+c*1*a*12+12*c*b*1*4*12*b*2*1*e*4+a+c*e*1*1*b*2*4*2*4+c*d*12*b*4*b*4*1*d*d+b+4+2+d+2*e*a*4*0*4+4+e+2+d+c+e*1*1*2*2*0*12*12*12+e*1*0*4*d*d*4*4*c*a*b*c*2*d*2*a+b+12+1+b+4+2+d+d+e$

Test Result:  $62+2*a+4*b+5*c+4*d+4*e+12*a*c+64*b*c*e+4608*b^2*c*e+192*b^2*c*d^3$

*Mathematica:*  $62 + 2 * a + 4 * b + 5 * c + 12 * a * c + 4 * d + 192 * b^2 * c * d^3 + 4 * e + 64 * b * c * e + 4608 * b^2 * c * e$

Test passed

■ Test: 38

Test Input:  
 $0*d*b*d*a^4*0+e+e+1+d+b+d+4+e+c+d+c+b+0+4*4*a*1*12*1*2*12+c*1*e*c*e*e*d*2*12*c+b+1+2+12+b+12+e+12+1+0+b+2+12*a*d*a*b+b*2*d*2*12+1*0*c*0*d*2*4*e*a*1*c*12*12*1+b+2*e*1*1*b*2*c*d+b*c*4*c*0*b*e*4*2*1*d+1+b+d+0+a+c+0*b*a*0*a*b*d*0*e*c*c*a*b*c+2+c+a+12+4+d+0+12+a*d*4*a*d*4*2*0*2*e*e*d*e*a*12+4+0+c+1+d$

Test Result:  $83+4610*a+7*b+5*c+6*d+4*e+48*b*d+12*a^2*b*d+4*b*c*d*e+24*c^3*d*e^3$

Mathematica:  $83 + 4610*a + 7*b + 5*c + 6*d + 48*b*d + 12*a^2*b*d + 4*e + 4*b*c*d*e + 24*c^3*d*e^3$

Test passed

■ Test: 39

Test Input:  
 $4+e+a*d*0+a+a+2+1+b*4+0+e+0+b+4+e*d*c*a*d*1*12+e*a*1*1*b*12*0*2*c*c*a+b+a+a+12+d+b*0*c*d*4*1*b*0*d*0+c+1+4+d+e+e+2+1*e*2*b*d*a*c*1*2*b*12*d*a*a*1+2+d+2+d+a+a+b+a+b*4*0*b*2*a*1*a*2*c*12+4+c+a+d+4+b+4+c+d*1*1+b+12+e+2+b+4+e*b+c+c+c+12+0+b+e+e+1*e*4+2+4+0+0+4+4+b+1+a*4*0*b*4*2*1*b*a*c*b+a+a*4+1+0+a+0*d*b*12+c+12*c+a*0*b*e*b*c*c+d*1*12*4+0*4*d*b*e*2*d*4*2*1*b+0*12*e*12*4*c*12*b*b*c$

Test Result:  $92+15*a+12*b+19*c+54*d+11*e+b*e+12*a*c*d^2*e+48*a^3*b^2*c*d^2*e$

Mathematica:  $92 + 15*a + 12*b + 19*c + 54*d + 11*e + b*e + 12*a*c*d^2*e + 48*a^3*b^2*c*d^2*e$

Test passed

■ Test: 40

Test Input:  
 $c+e+4+0+0+a+2+a+e+c+12+2+e+12+4+b+4+4*e+12+12+a+b+e+12+0+4+2+12*e*12*2+c+2+2+c+4+b+e+0*2*1*e*d*e*b*4*b+12+e+b+1+1*4*b*2*2*1*b*d*c*0*12*0*12*0*c*a+d*d*a*e*e*c*1*a*b*0*1*c*12*a*2*2*2*1*0*2*b*d*0*c*c*2*b*b*1*d*e*1*b+b+d+a+b+0+2*a*e*c*1*d*0*0*12*d*2*0*4+2+a+d+4+a+2+b*1*d*b*4*0*2*4*b*c*e*c*12*e*1*c*4*4*c*b*e*a+b+12+c+0+0+a+2+4+e*b+b+d+e+e+b*b*1*4*4+b+2+d+e+2+a*a+2*0+a+c+d+2+a+c+e*12+1+12+1+12+12*c+c+e+1+d+e+a+d$

Test Result:  $162+a^2+10*a+26*b+20*c+7*d+315*e+b*e$

*Mathematica:*  $162 + 10 * a + a^2 + 26 * b + 20 * c + 7 * d + 315 * e + b * e$

Test passed

■ Test: 41

Test Input:

$a^2 * e^2 + e + 0 + 0 + 1 + d + b + e + 1 + 4 * 4 * b * a * e + b * e * 2 * e * a * e * 0 * 12 * a * 4 * 4 * a * 0 * 1 + 1 * c * a * c + d + e + 4 + 4 * 2 + 2 * 4 * 12 * c * 0 * a + d + 4 * e + d + 0 + 2 + e + 1 + d + 4 * 0 + 4 + 2 + 12 + d + b + c + 1 + b + 12 + 2 * a * b * e * b * 4 * a * e * e$

Test Result:  $48 + c + 3 * b + 6 * d + 8 * e + 4 * a * e + a * c^2 + 16 * a * b * e + 8 * a^2 * b^2 * e^3$

*Mathematica:*  $48 + 3 * b + c + a * c^2 + 6 * d + 8 * e + 4 * a * e + 16 * a * b * e + 8 * a^2 * b^2 * e^3$

Test passed

■ Test: 42

Test Input:

$2 + 2 + e + 1 + a + a + 2 + 0 + a + 0 * 2 + a + e + 2 + 2 + d + 4 + 0 + c + d + 0 + b + a + 12 + c * d * e * b * 12 * 4 * 0 * b + b + b + a + 0 + b + 2 * c + d + a + c + d + 0 * 4 * 0 * a * c * 0 * 2 * 0 * 2 * a * 12 * b + 0 + e + 1 + d + 4 + a * e * e * a * b * d * 2 * a + 0 + d + e + e + d + a + 12 * 1 + 1 + c + 4 + c + 0 + 12 + 4 + 1 + e + 2 + 0 * c * b * 4 * e + e + 1 + b + 1 + c + c + 1 + 4 + c * e * e * c * d * 12 * 4 * a * 4 * a * d * e * 0 * e * c * 12 * a * 2 * d * 12 * e * 4 + 2 * b * a * 4 * c * 2 * 0 * c * c * 1 * c * 12 + e * a * e * 4 * a * 0 * 12 * 0 * 12 * d$

Test Result:  $75 + 8 * a + 5 * b + 8 * c + 7 * d + 7 * e + 2 * a^3 * b * d * e^2$

*Mathematica:*  $75 + 8 * a + 5 * b + 8 * c + 7 * d + 7 * e + 2 * a^3 * b * d * e^2$

Test passed

■ Test: 43

Test Input:  $12 + b + b + d + d + 0 * a + 4 + 1 + a + e + 4 + b + 0 * e + e + b + a + c + 2 + e + b + 2 + b + 1 * 4 + a + a + 4 + d + b + 2 + 0 + 0 + 2 * 4 * 1 * b * 12 * 12 * a$

Test Result:  $35 + c + 4 * a + 7 * b + 3 * d + 3 * e + 1152 * a * b$

*Mathematica:*  $35 + 4 * a + 7 * b + 1152 * a * b + c + 3 * d + 3 * e$

Test passed

■ Test: 44

Test Input:

```
2*0*0+a+4+1+b+2+a+4+12+e+d+b+c+0+c+0+d*2*a*4*a+a+2+a+0+0+
4+e+b+12+a+12+1+0+2+1+4+c+4+e*a*e*4*1*1*a*12*12+1+0+a*
b+c+c+b+1+0+0+b+e+d+d+1+e+2+a+e+b*0+e+4+2+1+a+c+e+0*12*
4*b*4*1*4*b*e*2*e*c+c+0+12+2*a*2*12*0*b*b*2*d+4*12*d*4*
b*4*12*2*12*d+e+2+b+a+4+0+0*1*c*a*e*12*e*b*a*c*2*a*1*
1*e+4+e+4+d+a+12*1*4*12*4*1*a*0+4+1+d+1+c+e+1+e+c+0+e+
e+e+c+d+4+4+a+c+c+c+d+1+0+b*c+b+0*b*a*b*0*2+a+b+d+4+c
```

Test Result:  $123+11*a+8*b+14*c+8*d+14*e+a*b+b*c+8*a^2*d+221184*b*d^2+576*a^2*e^2$

*Mathematica*:  $123 + 11*a + 8*b + a*b + 14*c + b*c + 8*d + 8*a^2*d + 221184*b*d^2 + 14*e + 576*a^2*e^2$

Test passed

■ Test: 45

Test Input:

```
a*2+2+12+1+2+c+d+1+2+12+a*4+2+0+2+2+4+2+e+e+1+a+d+a+12*
4+c+12+12+1+e+a*12*12+e*d*2*1*e*d*2*e*0*1+0*e*d*12*2
```

Test Result:  $118+152*a+2*c+2*d+3*e$

*Mathematica*:  $118 + 152*a + 2*c + 2*d + 3*e$

Test passed

■ Test: 46

Test Input:

```
e*e*a*1*0*c*a*1*d+4*c*b*2*e+d+b+c+a+c+2+1+d+d*e*1*0*1*
e*b*c*c+b+4+a+c+d+b+0+1+0+4*2*2*12*2*b*4+0*a*1*
0*2*c*2*1*1*a*4+e+4+12+d+c+1+1+a+2*c+12+0+b+a+
2+b+d+e+d+c*2+e+c+1*1*d*12*b*a*e*e+e+4+4+b*12*2
```

Test Result:  $48+4*a+1565*b+9*c+6*d+4*e+8*b*c*e+12*a*b*d*e^2$

*Mathematica*:  $48 + 4*a + 1565*b + 9*c + 6*d + 4*e + 8*b*c*e + 12*a*b*d*e^2$

Test passed

■ Test: 47

Test Input:

```
b*b*e+0+e+0+2+a+e+1+b+c+2*0+a+d+b+a+4+a+c+c+d+b+4*d+1+0+
c+a+a+b*b*b+2+12+4+a+4+b*12*b*a*d*e+1*0*c+1+c+e*c*c*d*
a*0*e*1*4*0*c*2*0*1*0*12*1*1*12*c+1+4+0+a+4+a+0+4+1+0+
d+d+d*4*e*2+e+2+0+a+2+e+0+1*e*2*2*12+2+0+e+0+e+d+2+2+d
```

Test Result:  $54+b^2+10*a+4*b+5*c+10*d+54*e+8*d*e+b^2*e$

Mathematica:

```
54 + 10 * a + 4 * b + b^2 + 5 * c + 10 * d + 54 * e + b^2 * e + 8 * d * e
```

Test passed

■ Test: 48

Test Input:

```
e*b*a*c*b*0*1*2*d*a*b*1*a*e*1*4*e*1*c*4+c+e+d+4+a+12+d+
e+4+c+0*0*a*a*d*b*1*2*b+12*4*0+d*e*2*a*e*b*d+d*12*1*
4*b*4*4*4+4+4+12+2*d+c+0+b*b*4+a+d+4+4+2+4*12*4+d+a+
e+c+1+0+d+c+12+12+0*a+a+a+4+1+c+2+c+0+a+4+4+1+12+a*a*
a*12*e*12*1*4*12*d+4*1*a*e*12+12+0+2+4+0+1+0*4*12*12+
0+1+d+2+1+12*c*d*e*d*c*4*d*d*d*12*1*c*0*0*0*d+a+e+2
```

Test Result:  $320+8*a+7*c+8*d+4*e+4*b^2+48*a*e+3072*b*d+6912*a^2*d*e+2*a*b*d^2*e^2$

Mathematica:  $320 + 8 * a + 4 * b^2 + 7 * c + 8 * d + 3072 * b * d + 4 * e + 48 * a * e + 6912 * a^2 * d * e + 2 * a * b * d^2 * e^2$

Test passed

■ Test: 49

Test Input:

```
4+0+4+b+2*a+c+1+c+12+b+a+c+d+c*2*0*0*0*b*4*12+0*e*b*1*a*e*
0*e*b*d+12+0+2+0+12+c+2+d+b+1+a*b+d+4+e+b+0+a+4+b+2+1*
a*12*a*b*e*4*e*a*a+b+2+a+1+a+12+d*b*b*12*a*4*e*0+c+4+b*
d+c+e+e+d+d+0+a+b+12*a*b*4*4*0*a*2*0*4*2*b*e*d*b+c+e+2+
b*a+a+4+d+4+0+0+12+e+b+c+12+d*1*12*b*4*c*0*b+2+4*12*b
```

Test Result:  $115+8*a+56*b+8*c+6*d+5*e+2*a*b+b*d+48*a^4*b*e^2$

Mathematica:  $115 + 8 * a + 56 * b + 2 * a * b + 8 * c + 6 * d + b * d + 5 * e + 48 * a^4 * b * e^2$

Test passed

■ Test: 50

Test Input:  
 $d+c+a+4+12+0+c+12*0*a*b*b+0*c*e*0*4*b*e*c+e+b+b+a+b+2+4+12+1+d*e+e+2+d+c+4+a+d+1+e*c*0*d*4*2*a+b*d*c*d*e*a*e*e+2+0*c*4*0*2+2+1+b+4+12+12+1+d+12+e+2*c*a*b*d*1*0*a*0*d+0*1*b*e*b+0+2+12*e*d*4*b*1*d*0*1*b*4*2$

Test Result:  $90+3*a+4*b+3*c+4*d+3*e+d*e+a*b*c*d^2*e^3$

Mathematica:  
 $90 + 3*a + 4*b + 3*c + 4*d + 3*e + d*e + a*b*c*d^2*e^3$

Test passed

■ Test: 51

Test Input:  
 $d*e*c*e*2*b*d*e+a+a*0*12+d+0+1+2+d+2+e*12+e+e+a+2+0+a+12+e*1+1*a*1*2*2*2*12+1+2+4*b+c+c+2+e+4+2+d+2*0*d*c*0*a+12+c+b+e+2+0*d*d+c+0*0*d*0+d*4*d*a*c+4*b*c*d*0*d*d*0*0+2+a+d+12+c+d+1*2+a+0+e+4+c+4+12+b*d*c*2*e*b*0*1*c$

Test Result:  
 $84+d^2+101*a+5*b+6*c+5*d+18*e+4*a*c*d^2+2*b*c*d^2*e^3$

Mathematica:  $84 + 101*a + 5*b + 6*c + 5*d + d^2 + 4*a*c*d^2 + 18*e + 2*b*c*d^2*e^3$

Test passed

■ Test: 52

Test Input:  
 $b+c+e+2+2+a+1+2+0+b*0*d+d*4*12*1*b*b*c*b*12*1*1*1*12*c*1*d*b*c*e*d*c*d*e*12*0*12*b*b*12+d*b*12*1*4*a*b*a*1*a*b*4*12*d*1*0$

Test Result:  $7+a+b+c+e$

Mathematica:  $7 + a + b + c + e$

Test passed

■ Test: 53

Test Input:

```
4+e+4+12+e+b+c*a*d*1*c+0+b+e+a+4+c+1+d+0+0*a+c+2+2+2+0+
12*a*a*0*e+b+b+c+c+e+d+12+a+1+1*c*1*b*b*e*2+0+0+e+
12+e+b+c+2+d+a*12*d*1*12*d*4*0*d*b+d+4+1+e+d+b*e*
4*d+1+1+0+2*a*e*c+d+d+e+12+0+e+2+e+1+d+a+c+2*c*2*2*
e*2*1*d*c*e*c*2*b*4*b+0*c*e+e*4*d*1*12+0+e+e+c+a+2
```

Test Result:  $82+4*a+5*b+7*c+8*d+12*e+48*d*e+2*$

$a*c*e+4*b*d*e+a*c^2*d+2*b^2*c*e+128*b^2*c^3*d*e^2$

Mathematica:

```
82 + 4*a + 5*b + 7*c + 8*d + a*c^2*d + 12*e + 2*a*c*e +
2*b^2*c*e + 48*d*e + 4*b*d*e + 128*b^2*c^3*d*e^2
```

Test passed

■ Test: 54

Test Input:

```
1*12+1*b+12+12+e+0+e+4+0+2+1+e*d*2*e*2*0*b+b+1+e+4+12+
a+0+12+12+e+0+a*12*d*12*c*d*e*b*1*0+12*0*c*b*12*
2*e*12*0*c*c*12*c*c*a*12*c*c*12+12+b+2+d+4+a+d+
12*0*4*b*a*c*0*a+2+e+4+2+b+c+0+b*c+b+2+1+a+2+4+0
```

Test Result:  $119+c+3*a+5*b+2*d+5*e+b*c$

Mathematica:  $119 + 3*a + 5*b + c + b*c + 2*d + 5*e$

Test passed

■ Test: 55

Test Input:

```
2*d*a*12*12*a*2*2+e+b+12+c+d+2+b+0+e+b*c*b*1*e*d*1*d*e*
d*e*2*d*c*e*0+a+0+4*c+a+0*1+0+e*4+d+c*e*1*12*
1*e*1*12*a+0+12+b+e+1+4+e+b+12+a+c+2+2+2+1
```

Test Result:  $50+3*a+4*b+6*c+2*d+8*e+1152*a^2*d+144*a*c*e^2$

Mathematica:

```
50 + 3*a + 4*b + 6*c + 2*d + 1152*a^2*d + 8*e + 144*a*c*e^2
```

Test passed

■ Test: 56

```
Test Input:
e+b+4+2+12+12+c+c+1*0*2*a*2*c*2+0*b*b*12*c*e*1*c*e+c+4+2+e+0+a+
4+d+c*b*e*b+a+e*a+d+b+4+d+4*e*0*0*2*12*1+d+4+4+d+12+b+12+c+
0+2+12+2+e*2*0*2+b+2+12+0+2*d*b*1*c*4+1+1+e+b+4+b+d+1*2+2+b+
c+b+2+12+4*d*2*c*2*2*1*e*0*b*b*c+b*1+e+e+0+e+2+4+b+e+b+12*
b*d*b*c+0*4*12*b*4*4*b*a+a*4*12*4*d*a*4*a*a*a+12*4*d*4*0*e*
e*a*e*2+d+d+a+1+4+4+12+12+b*2+e+4+a+e+d+1+2+2+4*b*2*e*d*c*d
```

```
Test Result: 178+4*a+13*b+5*c+9*d+9*e+a*e+
8*b*c*d+12*b^2*c*d+b^2*c*e+8*b*c*d^2*e+768*a^5*d
```

```
Mathematica:
178 + 4*a + 13*b + 5*c + 9*d + 768*a^5*d + 8*b*c*d +
12*b^2*c*d + 9*e + a*e + b^2*c*e + 8*b*c*d^2*e
```

Test passed

■ Test: 57

```
Test Input:
0*0*c*1*a*0*12*4*d+4+c+d+12+e+0+2+1*c*2*0*12+a+4+4+4+c+e+0+2+2+
2+e+2+b+0+12+a*d*c*1*12*c*c*d+1+e+12+12+b+c+4+d+b+a*c*4*1*2*d*
a*2*4*d*d+b+12+d+2+1+c*0*4*2*4*a*e+2*12*b*2*e*b*e*b+0+c+b+0+
2+c+4+0+2+4+e+12+4+e*2*e*2*0*12*1*e*1+e*2*b*d+a*4*12*a*1*12*2
```

```
Test Result: 122+a+5*b+5*c+4*d+5*e+1152*
a^2+2*b*d*e+12*a*c^3*d+48*b^3*e^2+64*a^2*c*d^3
```

```
Mathematica: 122 + a + 1152*a^2 + 5*b + 5*c + 4*d +
12*a*c^3*d + 64*a^2*c*d^3 + 5*e + 2*b*d*e + 48*b^3*e^2
```

Test passed

■ Test: 58

```
Test Input:
c+a+a+b+b+2+d+a+2+0+0+2*e+e+b+2*0*12*e*b*b*2*0*c*0*1+d+0+1+c+0+
2+b+a+1+e*a+a+12+12+c*4*b*c*c*c*c*e+1*12*a*12*b*1*b*a*a*a*
a*c*e+12+b+e+2+1+12+e+0+2+0+d+1+12+12*a*1*d*4*b+1*e*e*4*b*
e*a*e+12+12+1+a+e+0+0+e+1+b+12+0+1+1+b+12+0+c+b+4+e+a+0+d+0
```

```
Test Result: 130+7*a+8*b+3*c+4*d+8*e+
a*e+48*a*b*d+4*a*b*e^4+4*b*c^5*e+144*a^5*b^2*c*e
```

```
Mathematica: 130 + 7*a + 8*b + 3*c + 4*d + 48*a*b*d + 8*e +
a*e + 144*a^5*b^2*c*e + 4*b*c^5*e + 4*a*b*e^4
```

Test passed

■ Test: 59

Test Input:

```
c+2+0+0+b+a+2+0+12+a+12+a+0+b+b+a+b+c+1+0+b+e*2+12+0+c+
a+c+d+b+2*d+a+4+a+1+4+a*e*a*12*a*e*12*d+0*4*d*2*c+1*2*
b*0*2*a*12+2+4+b+12+a+12+d+e*e*e*b*4*a*c*b*e*12*12*1*0
```

Test Result:  $80+8*a+7*b+4*c+4*d+2*e+144*a^3*d*e^2$

*Mathematica:*  $80 + 8 * a + 7 * b + 4 * c + 4 * d + 2 * e + 144 * a^3 * d * e^2$

Test passed

■ Test: 60

Test Input:

```
b+a+1+c+d+4+4+0+e+12*4*4*12*d*0*12*1*0*b*e*0*a*c*2*e*1*
e*d+b+d+d+4+2+e+12+e+d+12+d+1+c*2*d*1+12+e+0+0+d*
d*12*c*d*2*4*0*4*b*12+0+c+1+a+b+0+b*c+b*a+d*b+d+
b+a+c+0+1+4+e+a+c+12+12+0+4+b+a+d+a+2+c+0+2+b+e+
c+0+1+b+b+2+2+b+e+2*c*c*a*4*0*e*a+0+4+b+0+d+2+b+2
```

Test Result:  $103+6*a+11*b+6*c+8*d+7*e+a*b+b*c+b*d+2*c*d$

*Mathematica:*  
 $103 + 6 * a + 11 * b + a * b + 6 * c + b * c + 8 * d + b * d + 2 * c * d + 7 * e$

Test passed

■ Test: 61

Test Input:

```
1*4*0*b*1*c+a+b+2+2+d+2+2*1+4+0+d*12+c+2+b+a+4+b+0+e+12+e+a+
c+4+d*d*2*1*b*4*1*e*d*c*a+c+a+b+e+12+0+a+1+a+4+c+4*2+b+
12+0+d+e+c*4*2*2*1*1*2*2*12*b*b*e+0*c*0*4*1*b*a*4+e*2*0*
4*4*c*0*d+c+1+b+4+e+a+c+2+2+1+b*c+a+4+4*0+e+4+2+1+e*a+4+
2+a+0+c+b+d+1+2+1+4+e*b*c*d*2*e*0*b*12*e*b*12*e*4*2*2*d*
d*12*0+b+12*e+a+12+1+c+c+a+1+12*e*e*12*c*c*c*c*b*b*4*e*
b*d*e*a+1*12*a*2*4*12*a*12*4+4+c+b+12+12*12*e*12*b*4*0*2
```

Test Result:  $136+11*a+9*b+10*c+15*d+18*e+55296*a^2+b*c+a*e+768*b^2*c*e+8*a*b*c*d^3*e+576*a*b^3*c^4*d*e^4$

*Mathematica:*  $136 + 11 * a + 55296 * a^2 + 9 * b + 10 * c + b * c + 15 * d + 18 * e + a * e + 768 * b^2 * c * e + 8 * a * b * c * d^3 * e + 576 * a * b^3 * c^4 * d * e^4$

Test passed

■ Test: 62

Test Input:  $a+2+1+0+4+a+c+b+d+a*0+1+2+12+12*2+0$

Test Result:  $46+b+c+d+2*a$

*Mathematica*:  $46 + 2*a + b + c + d$

Test passed

■ Test: 63

Test Input:  
 $d+1+b+1+e+a+d*a+d+4*4*b*a*d*c*d*d*d*1*a*c+1+c+a+c+a+a+b+12+12+c+d+4+0+a+d+1*12*12*a*2*b*4*12*d*a+4+0+c+4+0+0+1+d+12*4+0+1+4+12*c*2*b*d*0*1*2*2*0*1*b*b*c*d*c*4*d*0*4*0+4+a+12+a+d+12+2+a+b*1*4*b*b*2*2*1*a*b*4*e+a+4+0*0+2+a+e+0+d+12+4+b+4*12+2*c+a+e+c+2+e*d*0*2*4*d*1*1*2*e+0+b+b+4+c*a*12*d*c*c*e*d*a*d*12*0+2+b+a+12+b+2+4+b+1+e+12+c*e+b+2+e+2+1+e*0*4*a*d*12*0*2*d*d*12*2*12*a*1*e*2+b+2+0+d+2+b+12+12+b+d+1+4*a+d+b+c+a+d+b+a+0+4$

Test Result:  $270+18*a+14*b+8*c+11*d+5*e+a*d+c*e+13824*a^2*b*d+64*a*b^4*e+16*a^2*b*c^2*d^4$

*Mathematica*:  
 $270 + 18*a + 14*b + 8*c + 11*d + a*d + 13824*a^2*b*d + 16*a^2*b*c^2*d^4 + 5*e + 64*a*b^4*e + c*e$

Test passed

■ Test: 64

Test Input:  
 $a*d*e*1*a*d*12+1+e+a+0+d*4*d+4+c+c+12+b+a+d+1+b*1+0*2*c*e*1*d*1*2*a*12*e*2*a*d*b*b*12*a*d*0*e+e*4*0*4*4*1*12+c*0*1*e+2+d+a+a+2+4*e*e*12*0*4*1*2*2+1+b+a+b+2+0+2+12+1+b*b*4*2*2+2*4*a*1*4*d*e+4*d*a*0*b*d*0*b*c*1+1+12+a+c+d+12+b+c+c+4+c*1+4+e+d+c*e+c+a+b+c*e*e*12*b*a*d*12*12+4*c+4+c+12+e+2+a+c*d+12+2+e+2+0+12+e+12+b+a+1+e+c+1+e+e*d*c*b*0*4*e*4*c*a*b*b*a*b*d$

Test Result:  $133+9*a+7*b+13*c+4*d+7*e+16*b^2+c*d+c*e+4*d^2+32*a*d*e+12*a^2*d^2*e+1728*a*b*c*d*e^2$

*Mathematica*:  
 $133 + 9*a + 7*b + 16*b^2 + 13*c + 4*d + c*d + 4*d^2 + 7*e + c*e + 32*a*d*e + 12*a^2*d^2*e + 1728*a*b*c*d*e^2$

Test passed

■ Test: 65

Test Input:  $c+b+c+0+1$

Test Result:  $1+b+2*c$

*Mathematica*:  $1 + b + 2 * c$

Test passed

■ Test: 66

Test Input:

$4*4*12*12*c*1*2*a*a*b*b*e*4*2*b*e*12*c*d*b+d*c*d*e+a+1+b+4+d+a+d+4+2+0+1+d+1+a+0+12+b+4*4*4*12*b*a*c*1*1+1+2+a+e+0+e+b+b+2+d*2*b*a*1+12+d*2*e*0*12+c+e+b+d+1+b+12+e+b*1*0*12*e+e+e+2+2+2+1+b+b+0+a*1+4+e+b+b+c+12+d+2+d+a*c*2*c*b*1+b+0+0+d+2+0*12*e*a*1*1*b+a+0+2+0+b+4+12+4+a+12*0+b+c+2+d+a+4+c+1+2*d+2+e+e+12+c+0+e+0+e+d+4+2*2*12*0$

Test Result:  $129+8*a+14*b+5*c+11*d+11*e+768*a*b*c+2*a*b*c^2+c*d^2*e+442368*a^2*b^4*c^2*d*e^2$

*Mathematica*:

$129 + 8 * a + 14 * b + 5 * c + 768 * a * b * c + 2 * a * b * c^2 + 11 * d + 2 * a * b * d + 11 * e + c * d^2 * e + 442368 * a^2 * b^4 * c^2 * d * e^2$

Test passed

■ Test: 67

Test Input:

$b*a*2+12*4*c*4*e*1*4+0*a*a*a*e+c+b+0+1+4+1+1+c+c+b*d*e*4*2*c*0*0+12*4*a*c+4+b*2*0*1*1*b*2*12*b*b+0*4*e*d*12+a*0*2*b*4*d*a*b*c*12*c*1*d+c+0+d+0+0+b+2+b+12+a+b+b+0+d+2+2+12+a+1+2*4+0+a+12+12+e+a+1+b*c*d*4*12*4*2*d*2*b*12*e+b*4*1*0*12*12*a*c*c*0*12*e*1*0*a*0*2*1*12*4*a+b+a+a+a+0*1*e*0*0*2$

Test Result:

$75+e+7*a+6*b+4*c+2*d+2*a*b+48*a*c+768*c*e+9216*b^2*c*d^2*e$

*Mathematica*:  $75 + 7 * a + 6 * b + 2 * a * b + 4 * c +$

$48 * a * c + 2 * d + e + 768 * c * e + 9216 * b^2 * c * d^2 * e$

Test passed

■ Test: 68

Test Input:  
 $0*b*1*1+1+b+4+a+12+12+12+4+a+c*1*d*0*2*c*c*1*e+d*b*0*2*e+e+1+e+d+0+2*e+c+a+c+d+4+1+1+d+c*2*1*0*12*2*12*e*4*2*0+e+e+12+4+0+2+e+12+2*c*e*d*e*e*0*1*4*d*2*e*a*4*1*0*0+c+12+e+a+a+c+12+d+b+d*c*12*2*d*e*1*12*4*12*b+12*e*12*e*12*c*e+12*1*d*4*4*c*d*0*0+b+0+2+12+4+b*12*e*d*e*e*1*1*4*12+0+0+12+2+b*1+b+4+2$

Test Result:  
 $144+5*a+5*b+4*c+4*d+8*e+1728*c*e^3+13824*b*c*d^2*e+576*b*d*e^3$

*Mathematica:*  $144 + 5*a + 5*b + 4*c + 4*d + 8*e + 13824*b*c*d^2*e + 1728*c*e^3 + 576*b*d*e^3$

Test passed

■ Test: 69

Test Input:  $2+c+0+4+e+d*1*e+2+c+0+2+4+0+e*a*4*4*c*e*2*d*a+0+1+0+0+c+d+e+0+2+c+4+b+1+a+0+d*12*2*12*4*4*d*d*b*a*2*1*2*e+12+12+12+e+c+a+4+4+1+2$

Test Result:  
 $69+b+d+2*a+5*c+3*e+d*e+32*a^2*c*d*e^2+18432*a*b*d^3*e$

*Mathematica:*  $69 + 2*a + b + 5*c + d + 3*e + d*e + 18432*a*b*d^3*e + 32*a^2*c*d*e^2$

Test passed

■ Test: 70

Test Input:  
 $0*e*4*4*b*e*c*a*d*e+1+1+4+1+a+0+c+e*2+b+12+e+0+b+0*2*4+d*e*d$

Test Result:  $19+a+c+2*b+3*e+d^2*e$

*Mathematica:*  $19 + a + 2*b + c + 3*e + d^2*e$

Test passed

■ Test: 71

Test Input:  
 $b+b+12+a+a+2+b+12*4*d*4*0*a*2*d*b+12*2*2*2*d*0*b*4*2+2+c+e+d*0*b*0*e*c*b*0*4*0*c*c*a*e+0+c*0*e*12*c+2*0*0*b*12*e+1*1*c*2*c+12+12+a+e+1$

Test Result:  $41+c+3*a+3*b+2*e+2*c^2$

*Mathematica*:  $41 + 3 * a + 3 * b + c + 2 * c^2 + 2 * e$

Test passed

■ Test: 72

Test Input:  
 $4+2+12+0+4+4+b+12+c+d+4+0*2*d+e+2+c+d+2+1*d+0+b+a+a+2+2+2*e*d*a$

Test Result:  $50+e+2*a+2*b+2*c+3*d+2*a*d*e$

*Mathematica*:  $50 + 2 * a + 2 * b + 2 * c + 3 * d + e + 2 * a * d * e$

Test passed

■ Test: 73

Test Input:  
 $d*a*1+c*d*e*c*d*b*b*4*b*0*b*0+0+1+2+0+4+a+0+e+d+2*b+4+2+1+1+2+12+0+d+e+d+e+1+e+4*0+2+c+0+d+12+e+d*d*1*1*2*d*e*0*0*1*0+c*0*4*a*b*4*a+c+0+0+0+1+a+1+2+0*b*1*d*1*12*d*b*2*0*b*b+a+d+e+b+0+b+d+c*c+0+2+d+a+a+4+1+a*b*4*1*c*c*0*12*b*a+b*b*1*b*4*0*a*2*e+1+e+4+d+1+12+e+e+d+e+2+12+b+e*c+0+2+a+4+12+4+b+a+1+2+1+0+12+a+b+4+12+4+e*12+c+12+0+1+4+e+0+0+d+b+2+1+4+4+e+2+d+1+4*d+d*12*0*e*4*e*0*c*2*c*4*a*12*e*12*2+1+1+4+1+4+12*12*a*c$

Test Result:  $187+c^2+e^2+8*a+8*b+3*c+15*d+22*e+144*a*c+a*d+c*e$

*Mathematica*:  $187 + 8 * a + 8 * b + 3 * c + 144 * a * c + c^2 + 15 * d + a * d + 22 * e + c * e + e^2$

Test passed

■ Test: 74

Test Input:  
 $b*12*0*1*4*1*e*e+1+e+1*d*4*1*a*c*b*b*d*4*d*0*e*0*0*2*d+c*1*12*12*1*1*2+4+b+d+2+0+b+1+b+4+1*1*0*c*a+12+4+e+4+c+b+e*e*b*1*e*2*e*a*12*0+1*a*d*e+12+b+2+2+2+e*d+4+2+b+0+0+2+e+2*12*2*c*0*1+c+1*e*a*e*12*1*d*2+d+c+2+b+d*a*b*2*0*d*c*d+d+1+2+2+d+4+0+1+d+4+b+1+b+1+a+4+12+b+4+d+e+b*0*12*e*b*2*12*12*0*b*1+2+e+12+0+12+4+b+d+d*2*4+b+1+a+d+a*c+c+2*e*12*2*2*4*1*b*e*1*a+d*a*e*e*0*c*2+2+1+0+e+12$

Test Result:  
 $149+2*a+12*b+292*c+9*d+6*e+a*c+d*e+a*d*e+384*a*b*e^2+24*a*d*e^2$

*Mathematica:*  $149 + 2*a + 12*b + 292*c + a*c + 9*d + 6*e + d*e + a*d*e + 384*a*b*e^2 + 24*a*d*e^2$

Test passed

■ Test: 75

Test Input:  $e*0*e$

Test Result: 0

*Mathematica:* 0

Test passed

■ Test: 76

Test Input:  
 $e+1+b+0+d+a+e+4+e+c*b*12*a*4*e*c+d*2*e*e*c*4*0*c*c+0*0*0*c*4*c*4*c*4*12*0*1*e*1*0*1*d+0+0+1+12+1+b+b+a+1+1+a+d+4+4+a+d*d*12*4*2*c*a*c+a+4+4+2*b*2*a*0*e*b*c*0*4*2*e*d*12*2*b*2*12*e*4*d*2*c*12$

Test Result:  $39+5*a+3*b+2*d+3*e+48*a*b*c^2*e+96*a*c^2*d^2$

*Mathematica:*  
 $39 + 5*a + 3*b + 2*d + 96*a*c^2*d^2 + 3*e + 48*a*b*c^2*e$

Test passed

■ Test: 77

Test Input:  
 $2*4*e*c+e+2+e+e+a+c*0*e*a*b*a*c*4+c+b+b+d+c*b*c*0*1*e+e+d+4+1+2+12+1*c+4+d+4+12+1+0+e+4*1*c*c*0*c*d*d*b+e+d+b+e+e+1+c+d+c+e*0+4+4+2+d+1+e+a+12+b+a*c*e*b*4*b*b*4*e+e+a+1+0+c+d+4+b*b*4*1*12*e+1+b+2+c$

Test Result:  
 $74+3*a+5*b+6*c+7*d+10*e+8*c*e+48*b^2*e+16*a*b^3*c*e^2$

*Mathematica:*  $74 + 3*a + 5*b + 6*c + 7*d + 10*e + 48*b^2*e + 8*c*e + 16*a*b^3*c*e^2$

Test passed

■ Test: 78

Test Input:

```
c*d*4*b*e*1*e*e+c*1*0*1*e*c*4*12*a*c+4*d*a*a*c*c*0*0*2*
1+12*12+2+b*d+2+1+1+2+1+e+a+12+d+4+2*c*d*a*1*d*0*2*
c*1*a*c*e+b+1+12+0+c+a*a*a*e*a*a+a+c+2+1+12+a*2*1*
12*a*a*4*2*0+1+0+d+2+d+2+4+a+a+c*4*b*d*4*d*a*4+1*b*4
```

Test Result:  $206 + e + 4a + 6b + 2c + 4d + 64abcd^2 + a^5e + 4bcd e^3$

*Mathematica:*  $206 + 4a + 6b + 2c + 4d + 64abcd^2 + e + a^5e + 4bcd e^3$

Test passed

■ Test: 79

Test Input:

```
12*1*a*4*a*12+1+4+0+d*0*12*2+d*a+c+b+e+12+d+a+b+1+a*1*
4*e*2*0*4+4+e+2+a+d+c+d+d+e*12+e+d+1+1+2+d+4*1+4+12+a
```

Test Result:  $48 + 4a + 2b + 2c + 6d + 15e + 576a^2 + ad$

*Mathematica:*  $48 + 4a + 576a^2 + 2b + 2c + 6d + ad + 15e$

Test passed

■ Test: 80

Test Input:

```
b+b+12+12+1+4+1+4+d+a+d+c+12+12*c+12+a+2+12*4*0*c*a*c*
1*d*1*e*d+1*e*0+4+4+0*0+0+a*e*d*d*e*1*4+2+0+a*12+
12+4+a+0+a*4+e+c+0+c+a+0+d+4+1+2+b+12+0+4+4+4+b+
4+12+0+12*a*d*b*1*2*2*4*b*c+c+1+d+0+b*c*2*a*2*d
```

Test Result:

$134 + e + 20a + 4b + 16c + 4d + 4abcd + 192ab^2cd + 4ad^2e^2$

*Mathematica:*  $134 + 20a + 4b + 16c + 4d + 4abcd + 192ab^2cd + e + 4ad^2e^2$

Test passed

■ Test: 81

Test Input:

```
a*12*4*e+b+b+d+e+a+e+e*e*12*e*0*c*a*12+4*4*4*4*b*a*4*a*
1*e*e*4*c*4+a+d+c+b+b+a+1+d*2*0*2*c+b+1+e+4+2+0+a*1+
d+a+12+2+0+c*1*1*d*0*2*12*12*1+4*0*0*b*c*4*a*d*0+b+
d+0+a+d+0+b+e+0+2+c+4*d+b*12+b+12+0+a+4*4*0*4+2+d+2+
e+0+e*12*2*e*2*e*c*1*b*0*2*12*d*4*a+1*d*c*e*a*d*2*1
```

Test Result:

```
40+7*a+20*b+2*c+10*d+5*e+48*a*e+2*a*c*d^2*e+16384*a^2*b*c*e^2
```

*Mathematica:* 40 + 7\*a + 20\*b + 2\*c + 10\*d +  
5\*e + 48\*a\*e + 2\*a\*c\*d^2\*e + 16384\*a^2\*b\*c\*e^2

Test passed

■ Test: 82

Test Input:

```
12+0+e+0+1+c+e+4+0+a*1*e*4*c*b*1*d*d+4+1+a+a+4+0+b*0*4*
b*2+c+12+4+4+e+a+c+e+e+4*e+d+d+0+4+b+12+2+d+12+2+2+
d*4*12*c*1*c*0*c+0*b*c*2*2*4*4+2*2*0*d*e*1*1*1+0*0*4*
c*c*d*b*e*4*4*4*2*b*b+2*12*d*e*0*0*b*1*2*a*1*4*b*2*0
```

Test Result: 92+b+3\*a+3\*c+3\*d+9\*e+4\*a\*b\*c\*d^2\*e

*Mathematica:* 92 + 3\*a + b + 3\*c + 3\*d + 9\*e + 4\*a\*b\*c\*d^2\*e

Test passed

■ Test: 83

Test Input:

```
0*1*d*1*2*e*c*d*c*1*1*b*a*12*a*c*1+12*0*c*0*b*4*e*a+4*1*4*a*2*2*
e*2*0+d+e+e+a*0*c*e*1*c*e*1+b*e*e*d+2*0*e*1*0*b+c+e+b+a+a+
0+b+12+1+b+0+4+4*2*a*b*0*c*b*2*12*4*1*1*c*a+1*12+d+12+4+d*
4*e*d*d*e+d*d*a*b*12*1*1+0*12*0*0*1*d*4*12*12*0*1*2*2*e*c*
a*d*12*d*e*d*0*b*1*0*2*0*12*4*c*d*1*a*e*d*c+e*4*0*a+2+4+0+
1+12+c+1+d+0+e*d+b+b+2+a*a+2+4+12+d*e+1+d+a+c+0+12+a+c+12
```

Test Result:

```
110+a^2+4*a+5*b+4*c+4*d+3*e+2*d*e+12*a*b*d^2+b*d*e^2+4*d^3*e^2
```

*Mathematica:* 110 + 4\*a + a^2 + 5\*b + 4\*c + 4\*d +  
12\*a\*b\*d^2 + 3\*e + 2\*d\*e + b\*d\*e^2 + 4\*d^3\*e^2

Test passed

■ Test: 84

Test Input:

```
4*c*0*4*1*2*1*d*4*0+b+0+12+0+12*12*4*e*c+2+1+12+a+a+
b+2+d+1+a+4+0+1*2*0*d+12*4*12*d*a+4*c*a*b*0+4+
b*12*0*1*c*2*d*b+c+c+d+b+c+c+e+4+a+b*b*b*c+2+
d+1+4+d+a+12*1+e+1+12+1+2+4+c+0+d+2+2+0+4+d+4
```

Test Result:  $93+6*a+3*b+5*c+6*d+2*e+576*a*d+576*c*e+b^3*c$

Mathematica:

```
93 + 6 * a + 3 * b + 5 * c + b ^ 3 * c + 6 * d + 576 * a * d + 2 * e + 576 * c * e
```

Test passed

■ Test: 85

Test Input:

```
2+a+b+a+4+d+12+0+a+12+0+2+0+a+1+e+2+0+1+a+b+2+d+4*1+4+e+2+1*2*e*
2*2*4*d*4*12*a*a*0*2*e*d*b*4*4*12*a*b+12*12*12*b*b*e*a*d+a+
12+2+4+d+b+e+4+b*2*d*b*d*12*d*4*0+2+12+c+0+c*a*a*1*e*1+12*
e*a*12*4*e*c*d*a+b+a+4+d+12+4+b+4+a+1+1*2*a*e*e*2*2*12*c*e*
2*4+a+c+0+4+0+e+b+4+c*12+a*4*12*b*2*d*e*4*e*1*12+c+e+c+12+
2+4+b*b*2*2*1*d*e*c*c*d*c*1*0*c*1*2+2+4+0+b*2*c*0+e*e*4+a+b
```

Test Result:

$141+10*a+7*b+16*c+4*d+5*e+4*e^2+a^2*c*e+1728*a*b^2*d*e+4608*a*b*d*e^2+768*a*c*e^3+576*a^2*c*d*e^2$

Mathematica:

```
141 + 10 * a + 7 * b + 16 * c +
4 * d + 5 * e + a ^ 2 * c * e + 1728 * a * b ^ 2 * d * e + 4 * e ^ 2 +
4608 * a * b * d * e ^ 2 + 576 * a ^ 2 * c * d * e ^ 2 + 768 * a * c * e ^ 3
```

Test passed

■ Test: 86

Test Input:

```
b+0+a+b+a+c+4+1+d*d*12*4*1*a*0*0*a*d*d*0*1*a+2+2+2+2+2+c+0+d+b+
4+d+2+a+12*12*e+b+e+a+d+2+0+2*1*c+12+c+2+2+a+12+2*2+b+d+c+
d+a*c*e*a*d*4*4*1*1*c*d*d*12*12+0+e+0+0+2+0+0+1+d+4+e*0*2*
a*2*e*a+b+0+c+c+12*12*d+b+b+4+4+e+2+4+12+b+4+1+12+1*1*12*4*
e*e*b*c+d+e+a+d+a*e*0*2*1*d*4*e*0+1+4+4+2+a*12+c+1+a*c*e+
a+2+a+c+12+2+d+c+e*1*0*e*e*d*4*2*2*0*2*b*4+1+0+1+a*2*a*2*d
```

Test Result:  $135+21*a+9*b+11*c+153*d+148*e+c*e+4*a^2*d+48*b*c*e^2+2304*a^2*c^2*d^3*e$

Mathematica:  $135 + 21 * a + 9 * b + 11 * c + 153 * d + 4 * a ^ 2 * d + 148 * e + c * e + 2304 * a ^ 2 * c ^ 2 * d ^ 3 * e + 48 * b * c * e ^ 2$

Test passed

■ Test: 87

Test Input:  
 $b+12+1+12+12+b+a+2*2*c*e+2*e+12*b+12*1*c*c*c*e*a*4*e+a+$   
 $2+1*c+12*d*b+1+b+12*e+12*1*b*b*c+0+c+c+4+4+0+$   
 $4+12+a*1+1+12+a+0+a+1+e+a+e*b+c+d+c+4+0+c+12+b$

Test Result:  $93+d+e+6*a+3*b+5*c+b*e+12*b*c*d+4608*a*b*c^4*e^4$

Mathematica:  $93 + 6*a + 3*b + 5*c +$   
 $d + 12*b*c*d + e + b*e + 4608*a*b*c^4*e^4$

Test passed

■ Test: 88

Test Input:  
 $2+4+4+c*12+4+e+0+1+4+0*12+0+c*12+0+b+0+e+a+b+e+12+2*0+2+d+c*12*$   
 $1*a*c+c+12+a+c+4+12+c+4+4+a+c+12+1+d+d+1+12+12+a*0*0*1*c*$   
 $4*0*12+2+0+d+2+d+0+4+4+e*4+1+1+12+d+1+b+e+a+b+1*e*b*e*2+$   
 $d*2+0*12*c*0*0*4*d*0+2*0*1*2*c*d*d*e*0*a*12*12*c*b*12*0$

Test Result:  $134+4*a+4*b+28*c+8*d+8*e+12*a*c^2+2*b*e^2$

Mathematica:  
 $134 + 4*a + 4*b + 28*c + 12*a*c^2 + 8*d + 8*e + 2*b*e^2$

Test passed

■ Test: 89

Test Input:  
 $1*d*c*b*b+2*12*0*0*4*c*d+e*0*a*4*e*b*b*c*e+c+4+4+1+c+1+e+4+b+a*$   
 $12+1+2+12+d+e+0+e+4+1*2*a*a*c*12*0*4*0*1+e*4*4*12*1*1*2*1*d*e*$   
 $a*2*b*a+4*c*0*a*c*d*0*c*d*0*2*d*0*4*1+12+b+4+a+d+1*e*b*2*c*1*$   
 $12*4*2*1+e+4+c*0*2*d*0*2*a*0*12*1*1*12*e*12+c+1+2+d+c+d+0+12+$   
 $d+e+e+1+d+c+d*a*d*12*c*0*2*0+e+b+2+a+a*12*4*4+a+1+d+4+2*4*d*a*$   
 $12*1*d*12*4*d+e+e+2*12*0*b*4*4*c*e*12*e+4+0+e*c+12+a+a+b+4+b$

Test Result:  $96+209*a+5*b+5*c+7*d+9*e+$   
 $c*e+192*b*c*e+b^2*c*d+4608*a*d^3+768*a^2*b*d*e^2$

Mathematica:  $96 + 209*a + 5*b + 5*c + 7*d + b^2*c*d +$   
 $4608*a*d^3 + 9*e + c*e + 192*b*c*e + 768*a^2*b*d*e^2$

Test passed

■ Test: 90

Test Input:  $2*4*e*b*b*4+c+12+0+c+c+e*1+a+d$

Test Result:  $12+a+d+3*c+e+32*b^2*e^2$

*Mathematica*:  $12 + a + 3 * c + d + e + 32 * b^2 * e^2$

Test passed

■ Test: 91

Test Input:  
 $1*d*4+d*c*b*b*c*4*e*d*b+d+c+b+4+1+0+0*e+4+0+d+4+d+a+12+$   
 $1+2+e*e*a*12*a*c*0+2*a*4*d*a*12*12*d*2+2+0+b+$   
 $b+e+4+0+2*4+b+a+1+12+0+d+4+b+0*d*a*12*4*2$

Test Result:  
 $59+c+e+2*a+5*b+8*d+96*a*d+2304*a^2*d^2+4*b^3*c^2*d^2*e$

*Mathematica*:  $59 + 2 * a + 5 * b + c + 8 * d +$   
 $96 * a * d + 2304 * a^2 * d^2 + e + 4 * b^3 * c^2 * d^2 * e$

Test passed

■ Test: 92

Test Input:  
 $0*0*2*4+1*1*b*1*b*c*4+a+d+b+12+0+c+4+2+e+a+a+e+b+0+b+2+$   
 $4+0+1+2+0+a+b+a*0*a*0*4*e*4*e+0+0+b+d+2+4+4+b+a+2*$   
 $2*4*1*1*4*c*d*e+1+12+c+1+c*b*a*1*c*b*b*2*c*0+e+d+$   
 $4+d+b*2*12*e*a+a*d*4*4+d+1+0*0*c*0*4*4*4*12*e*0*12*$   
 $d*c*2*2*c*4*4+d+1+4+d*a*c+1*c*d*4*b*a*b*4*c*a*c+0+2$

Test Result:  $63+5*a+6*b+2*c+6*d+3*e+16*a*d+$   
 $4*b^2*c+24*a*b*e+a*c*d+64*c*d*e+16*a^2*b^2*c^3*d$

*Mathematica*:  $63 + 5 * a + 6 * b + 2 * c + 4 * b^2 * c + 6 * d + 16 * a * d +$   
 $a * c * d + 16 * a^2 * b^2 * c^3 * d + 3 * e + 24 * a * b * e + 64 * c * d * e$

Test passed

■ Test: 93

Test Input:  $c+b+a+e+2+4+12+a+b+1+c+12+2+c+12*4+c+d+$   
 $4+b*1*4*c*d*4*0*12*d*a+a*0*4*2*1*2+b*e*d+d*12*0*c*a$

Test Result:  $85+d+e+2*a+2*b+4*c+b*d*e$

*Mathematica*:  $85 + 2 * a + 2 * b + 4 * c + d + e + b * d * e$

Test passed

■ Test: 94

Test Input:  
 $0*12*12*2+12+4+e+d*a*2*c*1*e*12*0+c+a+e+c+1+e+b+2+2+1+c*d*4*a*$   
 $c*b*c*2*c*0+c+0+4+e+d+d+e*4+2+1+0+c+e+c+12+e+2+0+d+4+a+4+$   
 $0*a*d*b*12+0+d+e+c+a+12+a*0+12+1+2+1*d*a*1*c*a*0+d*c*0*0*$   
 $d*a*c*d*12*b*4*a*4*a*a*2+d+0+e+d+4+2+c+c+d*e+c+12+12+0+1+$   
 $12+b+e+4+b*4*12*0*e*c*2*12*c+2*12*1*b*a*a*e*e*2*e*12+4+2+$   
 $4+e*4*b*4+1+a+2*0*0*e*a*12*d*b*12*0*0*1+e*1*d*c*e*2*4*12$

Test Result:  
 $136+4*a+2*b+9*c+6*d+13*e+16*b*e+d*e+96*c*d*e^2+576*a^2*b*e^3$

*Mathematica*:  $136 + 4 * a + 2 * b + 9 * c + 6 * d +$   
 $13 * e + 16 * b * e + d * e + 96 * c * d * e ^ 2 + 576 * a ^ 2 * b * e ^ 3$

Test passed

■ Test: 95

Test Input:  $c+2*b+1*0$

Test Result: 0

*Mathematica*: 0

Test passed

■ Test: 96

Test Input:  $2+b+12+0+2+d+d+1+e*a*c*a+2+12+12+e+c+$   
 $b+4+b*a*e*c*1+e+2+e+1+b+12+4+2+b+e+1+1+e+2+12+4+12+e$

Test Result:  $100+c+4*b+2*d+6*e+a^2*c*e+a*b*c*e$

*Mathematica*:  $100 + 4 * b + c + 2 * d + 6 * e + a ^ 2 * c * e + a * b * c * e$

Test passed

■ Test: 97

Test Input:

$4e^d x^0 a^{12} x^4 + 2 + 4 + 1 + d + 12 + 2 x^{12} + b + a + 1 + c x^{12} x b^{12} x^2 + 1^4 e^d x^{12} e^4 + d x^{12} x^{12} + b b d e^4 + 4 d d x^2 e^d + 2 b^4 x^0 x^4 a d x^0 x^0 + 1 c x^{12} x^4 e a x^4 x^2 x^4 + a + 2 + b + 12 + e + c + 4 + c$

Test Result:  $62 + e + 2a + 2b + 2c + 145d +$

$1536 a c e + 4 b^2 d e + 8 d^3 e + 110592 b c^3 d e^2$

*Mathematica*:  $62 + 2 a + 2 b + 2 c + 145 d + e +$

$1536 a c e + 4 b^2 d e + 8 d^3 e + 110592 b c^3 d e^2$

Test passed

■ Test: 98

Test Input:

$2 x^{12} d a d a x^2 + c + c + 12 e + c + d + 1 + 1 + c + 0 + 12 + 2 + c + b + 12 b + d + c + 1 + 2 + 12 + c + b a a c e x^0 x^0 d e a x b^{12} c^4 + 4 + e + e + e + 12 + 4 + 0 + 12 + c x^0 a^4 x^4 x^4 a a a e + d + 4 + 2 + 4 + d + 4 + b + 2 + 12 + b b d d a x^0 x^2 a + 0 x^4 a b e x^1 a d d x^1 x^4 x^4 d x^1 x^2 e x^0 x^0 + 12 + d + 4 + e + 0 + 1 + c + b + e + c + b + e$

Test Result:  $108 + 16b + 8c + 5d + 17e + c^2 e + 96 a^2 d^2$

*Mathematica*:  $108 + 16 b + 8 c + 5 d + 96 a^2 d^2 + 17 e + c^2 e$

Test passed

■ Test: 99

Test Input:  $1 + c + 2 + 12 + c + b + 2 x^4 d x^0 x^0 a b x^1 d x^4 a x^1 e x^1 x^2 x^0 x^2 d x^2$

Test Result:  $15 + b + 2c$

*Mathematica*:  $15 + b + 2 c$

Test passed

■ Test: 100

Test Input:

$e + 0 + c + 1 + b + a + b + d x^2 a e + 4 x^2 x^4 + e + 0 + c + 1 + 1 + 12 + a + 0 + b + 12 x^1 + d + 2 + c x^d + e + d + a + b + 1 + b + 4 + 1 + 2 x^c + d + 2 + 12 + 1 + c + 12 a e x^2 x^1 b d x^c a a a e x b^2 b e x^{12} e e x d d + 0 d x^c d x^2 + d x^1 e x d^{12} e x^0$

Test Result:  
 $82 + 3a + 5b + 5c + 3d + 3e + cd + 2ade + 576a^3b^3cd^3e^5$

*Mathematica*:  $82 + 3a + 5b + 5c + 3d + cd + 3e + 2ade + 576a^3b^3cd^3e^5$

Test passed

■ Test: 101

Test Input:  
 $2e * a * d * 2 * 1 * 4 * b + 12 * a + 0 * 2 * b + c + a + e + a + b + 0 * c + 4 * a + d + d * e + 2 * 12 + 1 * 2 + 0 * b + 2 * c + a + e + a + 4 * c * c * a * 0 * 12 * 12 * 2 * c * c * 12 * c * 12 * b$

Test Result:  $37 + 6a + 3b + 3c + 2d + 3e + 16 * a * b * d * e$

*Mathematica*:  $37 + 6a + 3b + 3c + 2d + 3e + 16 * a * b * d * e$

Test passed

■ Test: 102

Test Input:  
 $e * e * c * a * d * 0 * a * b * 2 * 1 * 1 * b * 0 * 1 * a + 0 * a * e * d * d * e * c * a + 12 * e + 2 * c + 2 * b + 0 * 0 * 2 * 0 * e * 0 * 1 * 2 * e + 12 * d + 0 * a + 1 * b + b + 12 * 1 * 0 * 0$

Test Result:  $31 + c + 2a + 3b + 12d + 2e$

*Mathematica*:  $31 + 2a + 3b + c + 12d + 2e$

Test passed

■ Test: 103

Test Input:  
 $12 * 0 * 2 * c * d * 2 * 4 * 2 * 12 * 0 * c + 4 * 4 * e + d * b + d * d * d * b * 12 * e * d * 0 * a * 0 * a * 0 * 12 * b * e * e * e * 2 * a * 12 * d * b * 1 * e * 0 * 1 * 4 * 1 * b * d * 2 * 1 * c + a + 2 * d + a + 2 * 0 * 12 * 12 * 1 * 12 * c + 2 * a + 2 * e + a + 12 * b * 4 * 2 * 2 * d + 0 * b + e + 4 * 12 * 0 * b * 12 * e * b * 4 * 0 * d + 2 * a + c + 0 * 0 * b * 1 * b * a * e * 2 * a + 4 * 4 * 1 * 4 * 0 * 4 * 2 * 12 * 12 * 0 * d + c + c + c + e * 0 * 1 * 12 * 1 * c + c + a + 1 * e + a * b * 4 * c * 1 * b * 12 * 2 * 2 * 12 * 12 * 12 * 4 * a + c + 12 * 12 * 12 * b * d * c * 12 * a + c * a$

Test Result:  
 $109 + 8a + 98b + 9c + 7d + 4e + ac + 331776b^2c + 1728 * a * b * c * d$

*Mathematica*:  $109 + 8a + 98b + 9c + ac + 331776b^2c + 7d + 1728 * a * b * c * d + 4e$

Test passed

■ Test: 104

Test Input:  $12+0+0+e+1+0+2+1+d+12+1*a*b*d*d*b*0+0*a*1*1*0*c+e*4+1+b+2+b+0*12*d*d*1*0+c+a*12*2*a*c*2*12*1$

Test Result:  $31+c+d+2*b+5*e+576*a^2*c$

*Mathematica*:  $31 + 2 * b + c + 576 * a^2 * c + d + 5 * e$

Test passed

■ Test: 105

Test Input:  
 $a*4*b*a*b*c*0*a*d+c+d+1+a+12*d+12+4+1+c+12+a+c+2+1+4+c+2+a+b+2+e+12+2+2+2+e+12*1+0+c+c+4+b*4+a+b+12+12+0*12*0*0*d*1*a*4*a+e+4+d+d+e+a+c+0+a+2*1+d+2+1+e+4+d+e+a*d*e+0*c*12*4*12*c*b*b+a+12+b+1+2+c+e+12*2+e*4+12+2+12+4*e*e*1*d*a*1*d*4*4+12+a*12*d*c*c*0*1*b*0*1*c*12*4*2*c*b*c*4+1+1+b+b+12+d+c$

Test Result:  $203+7*a+9*b+9*c+18*d+11*e+a*d*e+64*a*d^2*e^2$

*Mathematica*:  
 $203 + 7 * a + 9 * b + 9 * c + 18 * d + 11 * e + a * d * e + 64 * a * d^2 * e^2$

Test passed

■ Test: 106

Test Input:  $12+0*4*2*1*2*a*4*c*2*c*4*b*d+b*b*0*0*12*1*4$

Test Result: 12

*Mathematica*: 12

Test passed

■ Test: 107

Test Input:  
 $a+d+4+12+2+e*c*1*e*c*a*a*4*12*12*12*d*e*d*a*e*1*4+c+12+2+e+0+1+1*2*a*1*0*c*e+d+a+12+a+a+d*e+c+12*0+e+12+d+e*4*a*a*12*e*1*2+1*e*e+c+b+12$

Test Result:  
 $69 + b + 4a + 3c + 3d + 2e + d \cdot e + e^2 + 96a^2 \cdot e^2 + 27648a^3 \cdot c^2 \cdot d^2 \cdot e^4$

*Mathematica:*  $69 + 4 \cdot a + b + 3 \cdot c + 3 \cdot d + 2 \cdot e + d \cdot e + e^2 + 96 \cdot a^2 \cdot e^2 + 27648 \cdot a^3 \cdot c^2 \cdot d^2 \cdot e^4$

Test passed

■ Test: 108

Test Input:  
 $c \cdot 0 \cdot a \cdot 12 \cdot a \cdot 0 + 12 + c + 12 + a + 12 + a + 4 + 4 \cdot 0 \cdot e \cdot c \cdot 2 \cdot 12 + b + a + 12 + c + 0 + 4 + c + 12$

Test Result:  $68 + b + 3a + 3c$

*Mathematica:*  $68 + 3 \cdot a + b + 3 \cdot c$

Test passed

■ Test: 109

Test Input:  $1 + 4 + e + d + b \cdot b + c + d + b + a + b \cdot d \cdot 2 \cdot e \cdot 12 \cdot e \cdot a \cdot e \cdot 1 \cdot c + b + e + c + e \cdot 0 \cdot a \cdot e \cdot 1 \cdot d \cdot e \cdot c \cdot 1 \cdot a$

Test Result:  $5 + a + b^2 + 2 \cdot b + 2 \cdot c + 2 \cdot d + 2 \cdot e + 24 \cdot a \cdot b \cdot c \cdot d \cdot e^3$

*Mathematica:*  $5 + a + 2 \cdot b + b^2 + 2 \cdot c + 2 \cdot d + 2 \cdot e + 24 \cdot a \cdot b \cdot c \cdot d \cdot e^3$

Test passed

■ Test: 110

Test Input:  
 $e \cdot 4 \cdot 12 \cdot 0 \cdot d \cdot 12 \cdot 4 + c \cdot d \cdot 2 \cdot 1 \cdot c \cdot 12 \cdot a \cdot a \cdot 1 \cdot e + 0 \cdot d \cdot a \cdot 2 \cdot d \cdot 12 \cdot e \cdot 12 \cdot a \cdot 0 + c \cdot 0 + 0 + 0 + b \cdot 0 + b \cdot d \cdot 2 + e \cdot d \cdot 1 \cdot b \cdot 2 \cdot 4 \cdot 4 \cdot e \cdot c \cdot b \cdot 4 \cdot 0 + b \cdot c + e \cdot 4 + e \cdot b + 12 + a \cdot 0 \cdot b \cdot 2 \cdot d + 12 \cdot b \cdot b \cdot d \cdot d \cdot c + 1 \cdot 4 \cdot a \cdot 0 \cdot 4 \cdot d$

Test Result:  $18 + a + d + 4 \cdot b + 2 \cdot c + 2 \cdot e + 12 \cdot b^2 \cdot c \cdot d^2 + 24 \cdot a^2 \cdot c^2 \cdot d \cdot e$

*Mathematica:*  $18 + a + 4 \cdot b + 2 \cdot c + d + 12 \cdot b^2 \cdot c \cdot d^2 + 2 \cdot e + 24 \cdot a^2 \cdot c^2 \cdot d \cdot e$

Test passed

■ Test: 111

Test Input:

```
d*4*a*e*b*12+12+a+2+0+b*2+d+c+a+12+d+2*d*0*1*4+4+1+0+1+
0+2+d*12*c*e*4+4+12+e*a*1*4*b*a*2*b*12*4*4*e*12*0*
2*0*e*0*b*d*c*d+e+0+d+4+e+d+e+4+b+e+1*e*4*2*0*2*4*c
```

Test Result: 58+c+2\*a+3\*b+4\*d+4\*e+48\*c\*d\*e+48\*a\*b\*d\*e

Mathematica:

```
58 + 2*a + 3*b + c + 4*d + 4*e + 48*a*b*d*e + 48*c*d*e
```

Test passed

■ Test: 112

Test Input:

```
4+a+2*a*b+b+1+b+e+c+d+a*e+12+d+0+e+4+d+12*2+d+b+1+a+4+b*b*
0+0+12+e+b+4+12+c+d*a*a*4*a*12*4*d+4+e+0+a+12*0+e+d+12+
0+4+e+d*12*2*12*2*e*d*2*2+4+b+12+12*4+a+0+1+e+0+c+d+0
```

Test Result:

163+4\*a+6\*b+3\*c+6\*d+7\*e+2\*a\*b+a\*e+2304\*d^2\*e+192\*a^3\*d^2

Mathematica: 163 + 4\*a + 6\*b + 2\*a\*b +

```
3*c + 6*d + 192*a^3*d^2 + 7*e + a*e + 2304*d^2*e
```

Test passed

■ Test: 113

Test Input:

```
1*1*b*c*a+1+1+c+0+2*c+4+c+c+c+b+4+2+1+d+b+4+a+4+12+0+c+12+b+e+e+
d*c*1*c*d*e*d*2*c*4*a+e+4+c+12+4+2+c*c*12*1*c+e+a+12+1+2+2+0+
2+0+0+b+12+c+2+4+1+a+b+b+a*4+12+4*12*a*2*2*4*12+a+a+0+e+b+b+e+
0*12+d+a+e+a+c+c+e+4+d+a+2+12+0+d+12+12*4*2*4*12*d*d+d*1*c*2*
d*d*c*b+12*12*0*2*0*1*e*1*12*d+a+0+4+c+1+1+2+1+0+0+4+2+d*d+12+
4+0+12+12+2+1+12+d+1*e*1*12*d*1*12*4*4*e+12+e+b+2+c*c*1*e*2*d*
0*4*2*12+c+1+12+a+0+12*b*0*1*12*c*2*e+a*a*4*12*4+e+c+e+0+b+e+2
```

Test Result:

246+9230\*a+10\*b+14\*c+5\*d+12\*e+192\*a^2+4609\*d^2+a\*b\*c+
12\*c^3+2304\*d\*e^2+2\*b\*c^2\*d^3+8\*a\*c^3\*d^3\*e

Mathematica: 246 + 9230\*a + 192\*a^2 +

```
10*b + 14*c + a*b*c + 12*c^3 + 5*d + 4609*d^2 +
2*b*c^2*d^3 + 12*e + 8*a*c^3*d^3*e + 2304*d*e^2
```

Test passed

■ Test: 114

Test Input:

```
e+2+12+a*c*2*e+4+12+e+0+0+4+b+4+4*a+1+a+e+c+d+d+c+b+2+
0+12+2+c+c+1+12+e+d+12+a*12+2+4+4+c+2+e+e+e+b*1*1*b*
d*12*1*d+b+b+e+0+4+4+c+d+0+12+0*c*12+1+2+c+0+4+c+0+d+
12*c+2+e*d*b*e*b*e+d*0*a*e*12*4*2*b*a*c+1+c*2+b+d+a+
e+0+0+12+c*0*c*0*b*c*c*1*e*0*0*c*0+4*e*a+12*c*e*12*2*
2*1*c*b*0*1*2*4*12*12*a*d*a*d*1*a*c*2*a*d+12+12+a+12
```

Test Result:

```
170+19*a+5*b+22*c+6*d+9*e+4*a*e+2*a*c*e+12*b^2*d^2+b^2*d*e^3
```

*Mathematica:* 170 + 19 \* a + 5 \* b + 22 \* c + 6 \* d +  
12 \* b ^ 2 \* d ^ 2 + 9 \* e + 4 \* a \* e + 2 \* a \* c \* e + b ^ 2 \* d \* e ^ 3

Test passed

■ Test: 115

Test Input:

```
12+12+12*1*d*12*4*b*e*c+4+e+1+0+b*1+d+0*e+12*1+d+c+a+a*c*0+1+b+
0+4+b*c*a*4*4*0*1+e+d+1+1+0+2+1*4+4+a+12+1+12+1+a+e+c+0+b+d+
1+e+e+1+0+0+1+4+0+d+4+0+12+12*b*b*b+12+d+12+4+e*12*d*1*c*1*
c*0+d*e*d*a*4*b*d*12*0*2*e+12+d+e+d+e+4+12+e+b+12+a+d+e*0*1
```

Test Result: 175+5\*a+4\*b+2\*c+9\*d+8\*e+12\*b^3+576\*b\*c\*d\*e

*Mathematica:* 175 + 5 \* a + 4 \* b + 12 \* b ^ 3 + 2 \* c + 9 \* d + 8 \* e + 576 \* b \* c \* d \* e

Test passed

■ Test: 116

Test Input:

```
c+12*2+1+2+1+a+4+e+b+0+e+a+4+d+e+2+0*b*1*12*4*b*e+1*d*b*0*a*1*d
```

Test Result: 38+b+c+d+2\*a+3\*e

*Mathematica:* 38 + 2 \* a + b + c + d + 3 \* e

Test passed

■ Test: 117

```
Test Input:
a+2+1+2+c+b+d+1+12*c*e*e*0*a*0+e*d*a*b*c*a*2*c*1*e*4+c+2+b+d+
2+b+0+c+2+b*d*2*a*c*c*e*b+0*1*4*4*a*e*0+b*1*b*d+12+1+e+
12+12+a+c+2*12+4+b+2+a+a+1*b*4*e+12+c+4+b*a*c*12*b+4*0*b*
12*4*0*b*e*1*12*12+c+d+c+e+2+0+d+c*d*b+e+a+a+1+c+c+2*c*d*
12*e*1+0+2+a+4+4+12+d*2+0+4*d*0*e*d*2*12*1*1*4*4*0+1+b+0+
4+d+d+4+c+0*2*0+4*1*1*1*0*c*1*4*4*d*b*e*0*b*e+0+d+1+2+c+1
```

```
Test Result: 135+7*a+5*b+12*c+9*d+3*e+b*d+4*b*e+b^2*d+
12*c*d*e+12*a*b^2*c+2*a*b^2*c^2*d*e+8*a^2*b*c^2*d*e^2
```

```
Mathematica: 135 + 7*a + 5*b + 12*c +
12*a*b^2*c + 9*d + b*d + b^2*d + 3*e + 4*b*e +
12*c*d*e + 2*a*b^2*c^2*d*e + 8*a^2*b*c^2*d*e^2
```

Test passed

■ Test: 118

```
Test Input: b*4*d*d+c*c*1*d*a+0*2*a*c*0*e*2*d+1*d*
1+12+e+12+b+b+12+0+e*4+4+0+a+12+1+1+1+12+c+b+b+e+4+1
```

```
Test Result: 72+a+c+4*b+6*e+4*b*d^2+a*c^2*d
```

```
Mathematica: 72 + a + 4*b + c + a*c^2*d + 4*b*d^2 + 6*e
```

Test passed

■ Test: 119

```
Test Input: 1*4*2*b*b*0*c*e+b*4*a+b+0+4+12+1+e+0+4*b*1*
b*a+e+a+d+2+a+0+2*d*b+b+e+0*a+0+2+1+e+12+0+2*4*a*a*e
```

```
Test Result: 34+d+2*a+2*b+4*e+4*a*b+2*b*d+4*a*b^2+8*a^2*e
```

```
Mathematica: 34 + 2*a + 2*b +
4*a*b + 4*a*b^2 + d + 2*b*d + 4*e + 8*a^2*e
```

Test passed

■ Test: 120

```
Test Input:
c+c*c*e*e*c*12*12*c*1*2*0*1*a*b+4+a+4+0*4+0+d+1+0*12*0*e*
1+1+0+c+b*b+a+0+e+e+1+4+a+4*b*0*e*0*b*e*a*c*c*0*e*e*2*e
```

Test Result:  $15 + b^2 + d + 3a + 2c + 2e$

*Mathematica*:  $15 + 3a + b^2 + 2c + d + 2e$

Test passed

■ Test: 121

Test Input:

$b + 12 + 2 + b + d + c + 4 + a + 4 + 0 + 0 + d + b + 0 + 4 + b + b + 4 + 1 * b * d + a + 2 + 1 + 12 + d + 4 + a * 12 + a + d + a + 1 + 4 + b + b + a + 4 + a * 12 * 2 * d * 0 * 12 * b * 1 * d + c * d * d * b * 2 * 0 * 2 + 0 * 2 * a * e * 12 * 1 * b * a * e * e + 4 * b * b * 2 * b * 12 * b * c * b + b + 2 + 4 + d + 0 + c * 4 + 0 + e + a + d + 12 + 1 + e + 12 + 0 + d + a + a + b + 2 * 0 * b * a + b * 0 * d * d * e * c * 0 + c * a * b * 1 * 12 * b * 1 * 0 + 12 + 0 + 2 + 0 * 12 * b * 12 * 2 * 0 * b + 12 * 2 * 2 * d * e * c * 2 * 4 * 0 * b * 1 * b * 0 * 2 * 0 * 4 * d$

Test Result:  $103 + 20a + 9b + 5c + 7d + 2e + b * d + 96 * b^5 * c$

*Mathematica*:  
 $103 + 20a + 9b + 5c + 96 * b^5 * c + 7d + b * d + 2e$

Test passed

■ Test: 122

Test Input:  $12 * d * 4 * b * d * c * b * b * 12$

Test Result:  $576 * b^3 * c * d^2$

*Mathematica*:  $576 * b^3 * c * d^2$

Test passed

■ Test: 123

Test Input:

$0 * 4 * 4 * e * e * b * b * 2 + d + 4 + 1 + c + 2 + b + 2 + 0 * 2 * a * 2 * 0 * 2 * 4 * e * e * a + a + b + a + 0 * e * 2 * d * c * 2 * d * b * d * 2 * 12 * 2 + 1 + c + 12 + 1 + e + 4 + e + d + d * 4 * 1 * 12 * 4 * 2 * 4 * e * c * b * 2 * b + a + e + d + 2 + 12 + c + 0 + e * 1 + c + a + 4 * d + e + 4 + d + 1 + 4 + 4 + 4 * b * 4 * b * e * 12 * c + 2 + b + c + 1 + c + a + e + 1 + b + 4 + c + 4 + 4 * a + 4 * 0 * 1 * d * e * 2 * 1 * 1 * e * 1 * a * b * a * d * 2 + c + b + d + 12 + 0 + b + d + 4 * 2 * 1 * 12 * 4 * c * a * 1 * 0 * 2 * 12 + 2 + d + 12 + a + 2 + b + e + c + 0 + e + 4 + 0 + 1 + 2 + 2 * c * b + a + 2 + e + 1 + e + b + e + b + 12 + 4 + 2 * 1 * c * 2 * 2 * e * c * c * b * e * e$

Test Result:  $124 + 11a + 9b + 9c + 11d + 11 * e + 2 * b * c + 192 * b^2 * c * e + 3072 * b^2 * c * d * e + 8 * b * c^3 * e^3$

*Mathematica*:  $124 + 11a + 9b + 9c + 2 * b * c + 11 * d + 11 * e + 192 * b^2 * c * e + 3072 * b^2 * c * d * e + 8 * b * c^3 * e^3$

Test passed

■ Test: 124

Test Input:  
 $0 \cdot e^{2 \cdot a \cdot e^{12 \cdot 1 \cdot c \cdot c \cdot a \cdot b \cdot a^{12} \cdot c \cdot e \cdot d \cdot 2 \cdot d \cdot 2 \cdot b \cdot e \cdot 4 \cdot 4 \cdot c \cdot 1 \cdot a + 0 \cdot d \cdot c \cdot 0 \cdot e \cdot 2 + a + 12 + 0 + 12 \cdot 0 \cdot 1 \cdot c \cdot 1 \cdot 2 \cdot b \cdot 1 \cdot 2 \cdot d \cdot 4 + 12 \cdot 2 \cdot 4 \cdot e \cdot d \cdot a \cdot a \cdot b \cdot e \cdot a \cdot a + e \cdot e \cdot 2 \cdot 4 \cdot 12 \cdot c \cdot 4 \cdot 0 \cdot d \cdot d \cdot e \cdot d \cdot 2 \cdot 1 \cdot d \cdot c \cdot 12 \cdot a \cdot e \cdot d \cdot a \cdot 4 + 4 + 4 + 0 \cdot d \cdot d \cdot 0 \cdot c \cdot 0 \cdot 1 \cdot 2 \cdot 0 \cdot b \cdot e \cdot 1 + 2 + 2 \cdot e \cdot d + 0 \cdot b \cdot 4 \cdot 4 \cdot d \cdot 1 + 2 \cdot b \cdot e \cdot a \cdot a \cdot a \cdot b \cdot e \cdot 0 \cdot d + b \cdot a \cdot b \cdot 0 \cdot e \cdot 0 \cdot d \cdot 4 \cdot d \cdot e \cdot 4 + 2 + 4 \cdot e \cdot d \cdot b \cdot e \cdot d \cdot 2 \cdot a \cdot 4 \cdot 0 \cdot 1 \cdot e \cdot 0 \cdot a + 2 + 12$

Test Result:  $56 + 8 \cdot a + 4 \cdot b + 4 \cdot d + 7 \cdot e + 16 \cdot b \cdot d + 4 \cdot d \cdot e + 96 \cdot a^3 \cdot b \cdot d \cdot e^2 + 18432 \cdot a^4 \cdot b^2 \cdot c^4 \cdot d^2 \cdot e^3$

*Mathematica:*  $56 + 8 \cdot a + 4 \cdot b + 4 \cdot d + 16 \cdot b \cdot d + 7 \cdot e + 4 \cdot d \cdot e + 96 \cdot a^3 \cdot b \cdot d \cdot e^2 + 18432 \cdot a^4 \cdot b^2 \cdot c^4 \cdot d^2 \cdot e^3$

Test passed

■ Test: 125

Test Input:  
 $c \cdot e \cdot 1 + 1 \cdot e \cdot 2 + 0 + 12 + 12 \cdot c \cdot 4 + a \cdot 0 \cdot b \cdot 0 \cdot 12 \cdot a \cdot 1 \cdot 0 \cdot 1 \cdot 12 \cdot a \cdot e \cdot 4 \cdot 0 \cdot b \cdot 2 \cdot d \cdot a \cdot 2 \cdot b \cdot 4 \cdot d \cdot c \cdot d \cdot a \cdot b \cdot 2 + 4 \cdot c \cdot 0 \cdot e \cdot e \cdot 0 \cdot e \cdot 12 \cdot b \cdot 0 \cdot 12 \cdot b \cdot b \cdot 0 \cdot 1 \cdot 12 \cdot a$

Test Result:  $33 + a + b + 5 \cdot c + 3 \cdot e + c \cdot e$

*Mathematica:*  $33 + a + b + 5 \cdot c + 3 \cdot e + c \cdot e$

Test passed

■ Test: 126

Test Input:  
 $a \cdot e \cdot 2 + 12 + 12 \cdot b \cdot d \cdot c \cdot b \cdot e \cdot 4 \cdot b \cdot 1 \cdot c \cdot 2 \cdot 1 \cdot e \cdot e \cdot 12 \cdot 2 \cdot c \cdot 1 \cdot 4 \cdot 2 \cdot 2 \cdot 12 \cdot d \cdot c \cdot b \cdot a + 12 \cdot 4 \cdot 0 \cdot b \cdot 2 \cdot c \cdot 12 \cdot b \cdot 12 \cdot e \cdot 12 \cdot e \cdot d \cdot d \cdot 4 \cdot 4 \cdot a \cdot 4 \cdot 0 \cdot b \cdot a \cdot 4 \cdot a \cdot e \cdot 0 \cdot 1 \cdot d \cdot c \cdot 2 \cdot 4 \cdot 4 \cdot 2 \cdot a \cdot 0 \cdot c \cdot 0 \cdot 12 \cdot 1 \cdot e \cdot 1 \cdot c \cdot 12 \cdot 12 \cdot 2 \cdot 12 \cdot b \cdot d \cdot 2 \cdot b \cdot 12 \cdot e \cdot 1 \cdot c \cdot e \cdot b \cdot b \cdot d \cdot 0 \cdot 0 \cdot 12 \cdot a \cdot 2 \cdot 4 \cdot 0 \cdot 1 \cdot a \cdot 1 \cdot a \cdot 4 \cdot 2 \cdot 12 \cdot 12 \cdot 0 \cdot 2 \cdot 1 \cdot c \cdot 2 \cdot 4 \cdot a \cdot 1 \cdot 1 \cdot c \cdot e \cdot c \cdot 1 \cdot a \cdot 1 \cdot b \cdot a \cdot 4 \cdot 2 \cdot 12 \cdot 2 \cdot 0 \cdot d \cdot a \cdot e \cdot 4 \cdot d \cdot e \cdot 2 \cdot b \cdot 12 \cdot d \cdot 2 \cdot 12 \cdot d \cdot 2$

Test Result:  $211 + 6 \cdot a + 8 \cdot b + 5 \cdot c + 6 \cdot d + 6 \cdot e + 96 \cdot a^2 + 8 \cdot a \cdot c + c^2 \cdot e + 48 \cdot c \cdot e^2$

*Mathematica:*  $211 + 6 \cdot a + 96 \cdot a^2 + 8 \cdot b + 5 \cdot c + 8 \cdot a \cdot c + 6 \cdot d + 6 \cdot e + c^2 \cdot e + 48 \cdot c \cdot e^2$

Test passed

■ Test: 127

Test Input:  
 $4 * e * 1 * e * 2 + 1 + c + 4 + 0 * 1 + 12 + e + e + 0 + 0 * e * 1 * e * 1 * e * b * 0 * e * 4 * b * b * e * 0$

Test Result:  $17 + c + 2 * e + 8 * e^2$

*Mathematica*:  $17 + c + 2 * e + 8 * e^2$

Test passed

■ Test: 128

Test Input:  $1 + e + 2 + e + 2 + c + b + 0 + a + a * 2 * 12 * 1 * 0 * b * 4 * 1 * b + 4 + a + 1 + c + a + 12 + 4 * a + a + 2 + d + c + b + 4 + 1 + a + 0$

Test Result:  $29 + d + 9 * a + 2 * b + 3 * c + 2 * e$

*Mathematica*:  $29 + 9 * a + 2 * b + 3 * c + d + 2 * e$

Test passed

■ Test: 129

Test Input:  
 $a * 4 * 1 * a * e * 4 * 12 * d * 4 * d * d * e * b + 0 + a + 0 + 2 + 1 * a * c * c * b * 4 * a * e * c + 0 + e + 1 + a + 12 + d + 12 + 2 + 2 + 4 + b + 1 + b * 1 * c * 0 * a * 0 + 1 * 4 * e * 2 * b * c * a + d + a + 4 + e + a + 12 * d + 12 + 0 + 12 + c + 4 * 1 * d * 0 * 1 * d * b * 4 * 0 * b * 0 * 1 * 0 * 4 * 0 * c * 1 + e$

Test Result:  
 $64 + b + c + 4 * a + 14 * d + 3 * e + 8 * a * b * c * e + 4 * a^2 * b * c^3 * e + 768 * a^2 * b * d^3 * e^2$

*Mathematica*:  $64 + 4 * a + b + c + 14 * d + 3 * e + 8 * a * b * c * e + 4 * a^2 * b * c^3 * e + 768 * a^2 * b * d^3 * e^2$

Test passed

■ Test: 130

Test Input:  
 $d + c + c + 2 + 2 + 1 + 2 + a + b + a + c + 2 + 1 + 12 + 4 + b + 0 + d + 1 + e + 1 + e + 0 + 2 + 12 + c + 0 * 0 + e + 4 + 1 + 2 + 2 * b * 2 * a * b * 1 * 12 * d + b * 0 + a * c * e * c + 12 * 2 * b * a * b * b * c * 0 + e + 12 + e + c + c + 0 + a + 0 + b + 2 + 4 + 4 + d + 0 + b + d + c + 12 + 4 + 12 * d * c * a * d * 2 * 12 * 2 * a + 1 + d + d + e + 2 + e$

Test Result:  
 $90 + 3 * a + 4 * b + 7 * c + 6 * d + 7 * e + 48 * a * b^2 * d + a * c^2 * e + 576 * a^2 * c * d^2$

*Mathematica:*  $90 + 3*a + 4*b + 7*c + 6*d + 48*a*b^2*d + 576*a^2*c*d^2 + 7*e + a*c^2*e$

Test passed

■ Test: 131

Test Input:  
 $0+c+4*c*1*d*b*d*0*0*1*b*a*12+4+b+2+4+a*4+12+b+c+e+0+b+b*4*1+e*d*d*e*b*e*1*4*a*e*1*c*c*2*d*d*c+c+a+2+1+c+d+0+2+b+e+0*1*e*d*e+e+a+4+e*4*c*0*d*b*e*0+12*12*1*d*1+1+c+c+b+0+d+e+4+d+b+b*4+d+1+e+b+c+a*a*12*2*12*a*0*a*2$

Test Result:  $37+6*a+15*b+7*c+148*d+5*e+8*a*b*c^3*d^4*e^4$

*Mathematica:*  
 $37 + 6*a + 15*b + 7*c + 148*d + 5*e + 8*a*b*c^3*d^4*e^4$

Test passed

■ Test: 132

Test Input:  
 $12+e+a+12+12+0+0+a+0+b*b+2+12+12*4*e*b*2+e+2+a+d+4+d*1+e+a+0+d+4+1+1+a+e+e*e*a*c*c*b*d*1*12*d*12*1*4*e*a*d+1+0+4+1+c+12+2+e+12*4*1+4+0+12+a+2*2*d*d*2*a*d*a*1+b+0+2+1+c+c*12*c*4*d+4+2+0+c$

Test Result:  $123+b+b^2+6*a+3*c+3*d+5*e+96*b*e+48*c^2*d+8*a^2*d^3+576*a^2*b*c^2*d^3*e^3$

*Mathematica:*  $123 + 6*a + b + b^2 + 3*c + 3*d + 48*c^2*d + 8*a^2*d^3 + 5*e + 96*b*e + 576*a^2*b*c^2*d^3*e^3$

Test passed

■ Test: 133

Test Input:  
 $e+e+d+c+0+b*b*12*0*0*4*c+d*0*d*1*2*a*a*0*a+0+12+4+c+0+e+0+2+a*1*12*a*a*b*2*0*0*b+b*c*1*c*c*b*12*a*2*a*a*c*c*a+b+c+d+d+c+2+c+12+4+d+a+c*c*4+e+4+e+2+c+b+0+b+4+d+a+a+d+c+4+d+4+2+a+1+e+12+12+e+c+d$

Test Result:  $81+4*a+3*b+13*c+8*d+7*e+24*a^4*b^2*c^5$

*Mathematica:*  
 $81 + 4*a + 3*b + 13*c + 24*a^4*b^2*c^5 + 8*d + 7*e$

Test passed

■ Test: 134

Test Input:  $4+b+a+1+0+a+a+0*a*c*c*4*c*d*0*a*e$

Test Result:  $5+b+3*a$

*Mathematica*:  $5 + 3 * a + b$

Test passed

■ Test: 135

Test Input:  $2+c+4+d+b+e+b+12+0+e+c*a*d*c*12$

Test Result:  $18+c+d+2*b+2*e+12*a*c^2*d$

*Mathematica*:  $18 + 2 * b + c + d + 12 * a * c^2 * d + 2 * e$

Test passed

■ Test: 136

Test Input:  
 $c*2*b*4*1*12+e+c+a+1*c*12*e*4*12*a*b*c*0*2*e*1*b*4*b*12*$   
 $c*e*1*a*4*2*b*d*1*d*12*d*12*d*0*c*c*2*2*12*b*c*a*4*b*$   
 $d*0*1*e*d*a*c*c*c+e+2+a+1+e+b*c*12*0*b*b*12*1*d*0+b+$   
 $0+c+0+12+12+4+1+b+2*2*a*2*12*12*4*b*4*12*1+4+12+0+c+$   
 $b+0+4*1*c*12*a*4*b*d*a*b*0*2*c*4*e*b+e*4*e*d*4+0*e*2*$   
 $a*1*12*a*a*1*c*e+a+b+a+1+b+12+1+2+d*e+e+12+4+c+e+b+1$

Test Result:  $81+4*a+6*b+4*c+5*e+221184*a*b+96*b*c+d*e+16*d*e^2$

*Mathematica*:  $81 + 4 * a + 6 * b +$   
 $221184 * a * b + 4 * c + 96 * b * c + 5 * e + d * e + 16 * d * e^2$

Test passed

■ Test: 137

Test Input:  $c+b+12+e+e+d+1+4+b+12*a*d$

Test Result:  $17+c+d+2*b+2*e+12*a*d$

*Mathematica:*  $17 + 2 * b + c + d + 12 * a * d + 2 * e$

Test passed

■ Test: 138

Test Input:

$b * d * 4 * e * 0 * 1 * e * 1 + e + a + e + 2 * d + 4 * e + e + a * d + d + 1 + a + e + b + a + b + c + a +$   
 $d * 12 * a * a + c * 0 * d + c * e * 0 * d * 1 * 2 * 4 * 4 + 0 + b + c + 12 * e + e +$   
 $a * 4 + 1 + 0 + b + 4 + 12 * c + b + 12 + 12 * a * 4 * d * 0 * 4 * a$

Test Result:  $60 + 8 * a + 5 * b + 3 * c + 2 * d + 7 * e + a * d + 12 * a^2 * d$

*Mathematica:*  $60 + 8 * a + 5 * b + 3 * c + 2 * d + a * d + 12 * a^2 * d + 7 * e$

Test passed

■ Test: 139

Test Input:

$a + a + 1 + 12 * c + d + 0 * 4 + 2 * b + a + a + 1 + 4 + 2 + 4 + 4 + a + 12 * c + b + a + d + 0 * 2 * 0 * b * d *$   
 $e * d * 4 * c * e * c * b * c * 1 * 0 * 2 * 4 * d * a + 4 * c + e + 12 * b + 1 + 0 + a + 0 * 0 * a * a * 1 +$   
 $c * 2 * b * c * d * d * d * b * 4 * a + 0 * 4 * b * a * b + 4 * d + 12 * a + d * c * 12 * 2 * d * d * e * e$   
 $e * 1 * e * 12 * 4 + 1 * b + d + 2 * b + b + a + b + 12 * 4 + e + 12 * 2 * e + 1 * 1 * 4 * d * a * c * 0 *$   
 $2 * 0 * 1 + 4 + 0 + 0 * 4 * e + 4 + 12 * 4 * c + a + c + 0 * b + 2 * 4 + 0 * e + 4 * 0 * b * 12 * 1 * d *$   
 $d * e * d * 12 * 12 * c * b + c + 4 * 1 + d * c + 1 * d + 4 * e * 4 * c + 4 * a + a + 12 * 1 + a + 0 * 4$

Test Result:

$178 + 13 * a + 8 * b + 7 * c + 7 * d + 8 * e + 4 * c * e + 288 * c * d^2 * e^3 + 8 * a * b^2 * c^2 * d^3$

*Mathematica:*  $178 + 13 * a + 8 * b + 7 * c + 7 * d +$   
 $8 * a * b^2 * c^2 * d^3 + 8 * e + 4 * c * e + 288 * c * d^2 * e^3$

Test passed

■ Test: 140

Test Input:

$e + c + 4 * d + 2 * e + d + b + 1 * 4 + 12 * 0 + 2 * 1 + 12 * 12 * c * 2 * e * 4 * 0 * b * e * 12 * c * 12 * 4 * a * 0 *$   
 $1 * 0 * 2 * 12 * 1 + b + b + 2 * e + 2 * b + e + c + 12 * a + 12 * 0 + d + 1 * d * b * 0 * 12 * b + d + 1 * b +$   
 $a + 0 * a + c * 0 * 4 * d + d + 12 * e + d + 0 * a + 4 * e * 12 * e + 4 * 4 * 12 * e + a + c * 2 * b * 2 * e * a *$   
 $1 * 2 * a + 1 * 4 + 12 * e * 2 * 1 * 4 * d * e * 1 * b + a + 1 * 4 * d + 2 * 1 * 1 * 12 * 2 * c * a * a + 0 * 2 * e +$   
 $2 * e + e * 4 * e + a + 4 * 0 * e + 4 * 2 * b + 4 * 2 * c + b + 0 * d + 2 * a + 4 * 12 * a * b * 4 * e * 1 * a$

Test Result:

$158 + 20 * a + 9 * b + 4 * c + 9 * d + 27 * e + a^2 * c + 8 * a * b * e + 96 * d * e^2 + 192 * a^2 * b * e$

*Mathematica:*  $158 + 20 * a + 9 * b + 4 * c + a^2 * c +$   
 $9 * d + 27 * e + 8 * a * b * e + 192 * a^2 * b * e + 96 * d * e^2$

Test passed

■ Test: 141

Test Input:  
 $d \cdot 0 \cdot 12 + 0 \cdot 2 + 12 + 12 + d + c + a + c + c + 12 + c + 1 \cdot e + 12 + b + e + 1 + e \cdot d \cdot a \cdot 4 \cdot b \cdot 0 \cdot b \cdot 4 \cdot b \cdot b \cdot d \cdot c \cdot b \cdot 4 \cdot 0 \cdot b \cdot c + c \cdot 0 \cdot 12 \cdot 12 \cdot c + d + c \cdot b \cdot 0 \cdot 0 \cdot 1 \cdot 1 \cdot a \cdot 12 \cdot d \cdot 4 \cdot e \cdot 1 \cdot c \cdot a \cdot 1 \cdot 12 \cdot 1 \cdot c \cdot d + 4 + e + d \cdot d \cdot b \cdot a \cdot 12 \cdot a \cdot 2 + b + e + b \cdot 4 + d + c + d + 0 \cdot a + d \cdot 0 + 12 + b + 2 + 0 \cdot b \cdot d \cdot b + c + b + a + 4 + 2 + 12 + 12 + a + 0 \cdot d \cdot d \cdot 4 \cdot 12 \cdot c \cdot 12 \cdot a + b \cdot 1 \cdot 12 \cdot d + a \cdot a \cdot e \cdot 0 \cdot 4 \cdot e \cdot 0 \cdot d + b + a \cdot a \cdot 4 \cdot e \cdot 1 \cdot 4 + b + 12$

Test Result:  $113 + 3 \cdot a + 7 \cdot b + 6 \cdot c + 4 \cdot d + 4 \cdot e + 12 \cdot b \cdot d + 16 \cdot a^2 \cdot e + 24 \cdot a^2 \cdot b \cdot d^2$

*Mathematica*:  $113 + 3 \cdot a + 7 \cdot b + 6 \cdot c + 4 \cdot d + 12 \cdot b \cdot d + 24 \cdot a^2 \cdot b \cdot d^2 + 4 \cdot e + 16 \cdot a^2 \cdot e$

Test passed

■ Test: 142

Test Input:  $a + c + c + 12 \cdot 2 + 2 + a + b + a + c + a$

Test Result:  $26 + b + 4 \cdot a + 3 \cdot c$

*Mathematica*:  $26 + 4 \cdot a + b + 3 \cdot c$

Test passed

■ Test: 143

Test Input:  $2 + c + e + a + c + 12 + 12 + 1 + e + c \cdot 12 \cdot c \cdot c \cdot 2 \cdot 1 \cdot 2 \cdot e \cdot 0 + 0 + e + b + c + c + 4 + b + 4 + 1 + 4 + e \cdot e \cdot 12 \cdot 1 \cdot e$

Test Result:  $40 + a + 2 \cdot b + 4 \cdot c + 3 \cdot e + 12 \cdot e^3$

*Mathematica*:  $40 + a + 2 \cdot b + 4 \cdot c + 3 \cdot e + 12 \cdot e^3$

Test passed

■ Test: 144

Test Input:  
 $a+2+b+4+a+2+e+d+2+b+0+e+4+0+4+b+12+e+12+d+4+b+4*1*1*12*0*12*2*1+4+12+a+a+d+1+e*c+e+1+d*b*2*0*0*a*0*c*e*a*2+1+b+b+a+a+1+c+4+2*a+2+e+d+a+2+c*a+0+12+4*d+1+c+d+d+a+1+b+e+b+b*c*2*a*d*1*c*1*b*12*b*2*c*1*12*1*12*1*1+b*c*b*b*e*2*1*c*a*c*c*a*a*a*a*b*e*e*e+0+a+4+e+4+a+1+12+2+b*a*e*a*c+0*4*a*b*c+b+1+b+0+e+0+d+c+e+e*b*0*c*4*0*a*2*12*b*b*c*a+12+0+2+12+1+4+4+d+12*d+1+2+d+1+a+4+e+1+1+0+c+d+4+2+e+b+1+12+d+c$

Test Result:  $179+13*a+12*b+5*c+24*d+11*e+a*c+c*e+a^2*b*c*e+6912*a*b^2*c^3*d+2*a^5*b^4*c^4*e^4$

*Mathematica:*  
 $179 + 13*a + 12*b + 5*c + a*c + 24*d + 6912*a*b^2*c^3*d + 11*e + c*e + a^2*b*c*e + 2*a^5*b^4*c^4*e^4$

Test passed

■ Test: 145

Test Input:  
 $2+e+b+12+12*b*0*c+12+1+d+2+c+4+b+4*2*a*2*4*12*2*a+b*e*d*c*2*a*d*12*0*0*b*4*2*a*d*a*12*2*4*0*d*12+2+12$

Test Result:  $47+c+d+e+2*b+1536*a^2$

*Mathematica:*  $47 + 1536*a^2 + 2*b + c + d + e$

Test passed

■ Test: 146

Test Input:  
 $1*2*d*e*4*2*c*a*c+2+a+e+12+2+c+d+e*4*a*1*4*1*e+c+c+1+e+d+d+1+d+c+12+4+12+a+2+0+c*d*b*e*2*d+c+b+c+e+d+4*2*e*1+a+1*e+4+d*4*e*0*a*a*b*a*1+d*0*4*c*a*b*4*2*12+e+b+0+0+d+12+b+1$

Test Result:  $65+3*a+3*b+6*c+6*d+13*e+16*a*e^2+16*a*c^2*d*e+2*b*c*d^2*e$

*Mathematica:*  $65 + 3*a + 3*b + 6*c + 6*d + 13*e + 16*a*c^2*d*e + 2*b*c*d^2*e + 16*a*e^2$

Test passed

■ Test: 147

Test Input:

```
2*1+e*c*e*a*0*1*0*12*b*12*c*4*b*2*0*2+c*4+2*2*b+e+c+d+
e+1+a+0+b*d*d+1+2+b+0+12+e+12+a*2+4+0+a+0+b+1+d+e+
b*4*d+12+d+0+d+12+c+2+1+2+0*2+1*1*0*c*e*d*1*e*1*d*
12+2+e+2+2+4*b+12+12+2+a+12+e+d+4+a+4+12+1*12*c+0*
c*c+a*0*d*4*0*0*12*12*0*b+b+b+2+d+4+d+0+2+a+12+d+d
```

Test Result:  $148+d^2+7*a+13*b+18*c+9*d+6*e+4*b*d$

*Mathematica*:  $148 + 7 * a + 13 * b + 18 * c + 9 * d + 4 * b * d + d^2 + 6 * e$

Test passed

■ Test: 148

Test Input:

```
12*c*1*d*0*1*d*4+1*a*1*2*a*a*4*0+4*e*e*12*1*4+e+0+d+d+12*d+2+0+
c+12+a+b+e+12+2+1+12+b+0+e+a+a+c+0+d+e+12+4+a+a+d+1+1+b+c+d+
12+2+b+a*0*e*a*a+c+2+a*1+d+1+0+d*2+12+d+4*1*d*0+a+c+12+a+a+d+
b+c*d*a*1*12+12+b+d+0+0+0+1+e+2*12+b+0+a+2+0+a+a+a+a+d+0+a+d+
0+4+e+1*0*c*12+1+1+2+1+e+d+c+c*d*a*d*2*a+b+a+a*0*0+1*12*2*d*4
```

Test Result:

$148+17*a+8*b+7*c+122*d+7*e+192*e^2+12*a*c*d+2*a^2*d^2$

*Mathematica*:  $148 + 17 * a + 8 * b + 7 * c + 122 * d + 12 * a * c * d + 2 * a^2 * d^2 + 7 * e + 192 * e^2$

Test passed

■ Test: 149

Test Input:

```
2*d*e*b*1*0*a+4*2*1*1*c*12*0*a*e*12*4*4*2*c*0*2*a*c*d*d*0*d*
4*1*b*4*e*1*e*a*1*b*e*b*1*0*12*12*1*0*2*d*c*0*1*2+a*e*1*
0*b*b+0*4*a+e+c+e+0+2+1+2+2+b*a+4+2+4+d+0+e+0+12+b+12+
1+0+0+a*d*a*d*1*2*c*0*1+4+a+c+a+d+2+12*1*4*b*b*12+0*b*
4*2*a*c*12*d*a*e*0+e+0+a+1+4+12+c+e+1+c*2*c*4*c*d*0*e*2
```

Test Result:  $66+b+3*a+3*c+2*d+5*e+a*b+576*b^2$

*Mathematica*:  $66 + 3 * a + b + a * b + 576 * b^2 + 3 * c + 2 * d + 5 * e$

Test passed

■ Test: 150

Test Input:

```
c*12*c*4*12*a*d*e+b*2*1*1*2*0+0*c*4*4*1*c+12+12+a+4+12+a*e*4*0+
4+4+1+4+c+a*d*1*4*a*1*4*a*b*4*4+2*b*4*2+4+e+2+e+0+2+2+12+d+
0+c+4+b+a+0+c*a+0+d+a+e+a+d*d*2*12+4+a+d+c+e+2+b+b+1+e*1*
a*1*b*a*a+c+2+c+0+c+c+1+c*a*d*e*c*1*c*d*e*2+2*4*d*c*12*e+
a+0+1+1+2+e+1+a+a+2+1+b+a+12+12+b+12+2+d+d+c+12+e*2*1*12*
0*2*d*1*4*b*0+a+a+e+12+c*e+1+0+2*1*0+4*b*b*0*b*1*c*d*12*1
```

Test Result:  $160+12*a+21*b+8*c+30*d+6*e+a*c+c*e+96*c*d*e+256*a^3*b*d+a^3*b*e+576*a*c^2*d*e+2*a*c^3*d^2*e^2$

*Mathematica:*  $160 + 12*a + 21*b + 8*c + a*c + 30*d + 256*a^3*b*d + 6*e + a^3*b*e + c*e + 96*c*d*e + 576*a*c^2*d*e + 2*a*c^3*d^2*e^2$

Test passed

■ Test: 151

Test Input:  $4*1*0*c*c*0*4*2*e*e+12*c*4*1*1*d*$

```
a*1*1*2*b*a*1*a*b*a*12*4*d+0*b*1*e*d*1*d*c*b+d+d+
b*e+b+2+c+12+b+2+4+b+0+b+e+e+e+d+a+d+1+a*12*e*b*d
```

Test Result:  $21+a+c+e+e^2+4*b+4*d+b*e+12*a*b*d*e$

*Mathematica:*  $21 + a + 4*b + c + 4*d + e + b*e + 12*a*b*d*e + e^2$

Test passed

■ Test: 152

Test Input:

```
b+b+4+a+e+2+c+d+1*1*2*0*1*e*c*b*b*4+2+1+4+0+c+c+2+a+1+c+e*d*0*2+
4+d*12+c+b*a*b*e*2*12*12*0*a+e*c*12*a*4*d*b*e+2*d*d*b*e*1*b
```

Test Result:  $20+e+2*a+2*b+5*c+13*d+2*b^2*d^2*e+48*a*b*c*d*e^2$

*Mathematica:*  $20 + 2*a + 2*b + 5*c + 13*d + e + 2*b^2*d^2*e + 48*a*b*c*d*e^2$

Test passed

■ Test: 153

Test Input:  
 $12 \cdot 0 \cdot 12 \cdot 2 \cdot d + d + 12 + 12 \cdot 0 \cdot d \cdot 4 \cdot d \cdot 1 \cdot e \cdot a \cdot e + 2 \cdot e + 1 \cdot c + d + c + d + b + a + d + 2 +$   
 $b \cdot e \cdot 1 \cdot 0 \cdot 12 \cdot b \cdot 0 \cdot 4 \cdot 1 + 4 \cdot e \cdot 1 \cdot e + e + 4 \cdot c + c + 12 + 1 \cdot c + 4 \cdot 12 \cdot 1 \cdot 2 \cdot 1 \cdot 2 \cdot$   
 $e \cdot 12 \cdot 4 \cdot 1 \cdot 4 \cdot 2 + 1 \cdot e + 12 + 2 \cdot e + 4 \cdot c + 4 + 12 + 2 + 2 \cdot e + 12 \cdot 4 + 1 \cdot b \cdot e \cdot 1 \cdot 0 \cdot$   
 $12 \cdot b \cdot 2 \cdot 12 \cdot e \cdot c + 1 + 12 + 1 \cdot 0 \cdot 2 + a + c + c + 12 \cdot 4 \cdot 2 \cdot e \cdot a \cdot c \cdot d \cdot 1 + b \cdot 4 \cdot a \cdot d$

Test Result:  $131 + b + 2 \cdot a + 11 \cdot c + 4 \cdot d + 73733 \cdot e + 4 \cdot e^2 + 4 \cdot a \cdot b \cdot d + 96 \cdot a \cdot c \cdot d \cdot e$

*Mathematica*:  $131 + 2 \cdot a + b + 11 \cdot c +$   
 $4 \cdot d + 4 \cdot a \cdot b \cdot d + 73733 \cdot e + 96 \cdot a \cdot c \cdot d \cdot e + 4 \cdot e^2$

Test passed

■ Test: 154

Test Input:  
 $b + 12 \cdot e + c + a + 1 + 0 + b + b + b + 0 \cdot e + 12 \cdot e + 12 \cdot c + 2 \cdot a + 12 + 12 \cdot e + a + 1 \cdot 1 \cdot 0 \cdot 1 +$   
 $b \cdot 12 \cdot 4 \cdot 0 \cdot e + e + c + a + c + b + e + c + b + c \cdot 0 + 12 \cdot a + 4 \cdot e + e + 12 + 12 \cdot 1 + 4 \cdot 12$

Test Result:  $106 + 6 \cdot a + 6 \cdot b + 5 \cdot c + 19 \cdot e$

*Mathematica*:  $106 + 6 \cdot a + 6 \cdot b + 5 \cdot c + 19 \cdot e$

Test passed

■ Test: 155

Test Input:  $e + a + d + a + 4$

Test Result:  $4 + d + e + 2 \cdot a$

*Mathematica*:  $4 + 2 \cdot a + d + e$

Test passed

■ Test: 156

Test Input:  
 $d \cdot e \cdot a \cdot 12 \cdot a \cdot a + 2 \cdot 4 \cdot 2 \cdot b + e + 12 + 0 + d + 0 + c + b + 2 \cdot c + 2 \cdot 0 + b + 1 + d + e + c + a + a + c \cdot$   
 $b \cdot a \cdot 2 \cdot c \cdot 2 \cdot b \cdot b \cdot 4 + a + a + 12 + 0 + 1 + b + b + d + 0 + a + 1 + a + 1 + 0 + 1 + d + 2 + 0 + e \cdot$   
 $d + d + 4 + 2 + 0 + 12 + d + e + 0 \cdot 1 \cdot 12 \cdot e \cdot e \cdot e \cdot 12 \cdot e \cdot b \cdot 1 \cdot a \cdot d \cdot b \cdot d \cdot d \cdot 1 \cdot d \cdot e +$   
 $1 + d + 1 + 0 + b + c \cdot b \cdot 0 \cdot b \cdot d \cdot 2 \cdot e \cdot a \cdot 1 \cdot 2 \cdot 2 + 12 + b + 1 + c + 4 + 2 + 4 \cdot 2 \cdot 4 \cdot 12 \cdot$   
 $b \cdot b \cdot 2 \cdot 1 \cdot 2 \cdot c + 12 + 4 + 4 \cdot c \cdot e \cdot c \cdot a \cdot d \cdot 1 \cdot a \cdot 4 \cdot 1 \cdot 1 \cdot 12 \cdot b \cdot 4 \cdot 2 \cdot b \cdot 0 \cdot c \cdot 0$

Test Result:  
 $88+6*a+22*b+5*c+7*d+3*e+d*e+1536*b^2*c+12*a^3*d*e+16*a*b^3*c^2$

*Mathematica:*  $88 + 6 * a + 22 * b + 5 * c + 1536 * b^2 * c + 16 * a * b^3 * c^2 + 7 * d + 3 * e + d * e + 12 * a^3 * d * e$

Test passed

■ Test: 157

Test Input:  
 $e*2*e*2*4*e*0*12*b*0*a*4*b*c*0*4*12+12*2*0*1+0*12*4*4*1*c*c*1+2*a*d*0*0*d*0*2*4*2*e+12+b+c+2+d+b+4+12+d+12*e*1*e*2*1*2*1*d*4$

Test Result:  $30+c+2*b+2*d+192*d*e^2$

*Mathematica:*  $30 + 2 * b + c + 2 * d + 192 * d * e^2$

Test passed

■ Test: 158

Test Input:  $12+b*2+e+a+a*2*d*a*c*1*d*12*b*0+d+c+4+1+e+2*e*1*4*b*e*1*12*12*12*1$

Test Result:  $17+a+c+d+2*b+2*e+13824*b*e^2$

*Mathematica:*  $17 + a + 2 * b + c + d + 2 * e + 13824 * b * e^2$

Test passed

■ Test: 159

Test Input:  
 $a+1+d+12+b+d+c+c+0+0+1*2*4*0*4*0*12*c*a*d+1+e+0+2+0+1+0+c+b*0+a+0+2+e*c*4*d*b*a*d*1*0*12+a*c*2*12*d+1+b+2+b+a+b+4*c*12*e+b+1+1*0*a*12*c*a*a*c+12*c*d*e*12*2*0*b*a+2+4+c+4+a*d+4+2+d+12+c+d+2*4*a*1*4*12*4*1*1*12+4+12+0*a*a*12$

Test Result:  $67+e+18435*a+6*b+5*c+4*d+a*d+48*c*e+24*a*c*d$

*Mathematica:*  $67 + 18435 * a + 6 * b + 5 * c + 4 * d + a * d + 24 * a * c * d + e + 48 * c * e$

Test passed

■ Test: 160

Test Input:  $a*a*2*1*c*e*12+2+d+e+0*e*0*a*0*1*0*d*d*4*a*0*d*c*d*0*1*2*2+a*c*12*d*a*a*4+a*12*d*c*0*0*c*12+1+a$

Test Result:  $3+a+d+e+24*a^2*c*e+48*a^3*c*d$

*Mathematica*:  $3 + a + d + 48 * a^3 * c * d + e + 24 * a^2 * c * e$

Test passed

■ Test: 161

Test Input:  $a+b+b+12+1+e+c+4+c+c+e*c*4*12+0+12+2+4+12+a+4+d+0*b*c*1*2*e*d*e*12*1*c*1*e*2*4*d*1*0*12*12+c+2+0+0+2+a*e*c*0*c*0*2*a*4+12*b*4*a*12*1*e*b*0*a*b*e*4*d*2*e*0*12$

Test Result:  $55+d+e+2*a+2*b+4*c+48*c*e$

*Mathematica*:  $55 + 2 * a + 2 * b + 4 * c + d + e + 48 * c * e$

Test passed

■ Test: 162

Test Input:  $d*4*e*d*a*12*1*b*2*a*0+1+4+b+0*d+d+4+4+a+d+0*0*0*d+1*e*1*2*b*12*1*e*a*0*b+a+b+c+c+4+b+d+1*0*4*4*d*d*12+2+d*4+4+2+1+c+1*b*d*12*a*12+0+a+12+2*12*4*e*0+a+c+e+12*1+1+2+2+2+0+0+4+c+d*12+c+0$

Test Result:  $61+e+4*a+3*b+6*c+19*d+144*a*b*d$

*Mathematica*:  $61 + 4 * a + 3 * b + 6 * c + 19 * d + 144 * a * b * d + e$

Test passed

■ Test: 163

Test Input:  $1+12+b+1+1+12*b*2+d*c*0*12*c*0*b+d+a+d+d+c*b*e*b*a*e*d*4+4+2+e+0+d+e*1*a*12*2*d*1*12*a*0*e*c*d*0*d*a+4+d*0+d+12*b*a*4+e+a+0+c*2+0+1+12+12+a*e*4*0*4*2*1+b+a+b+e+0+a+0+b+2*1*1*b*12*d*a*e+c+b+1+12+e+4+b+a*d*12*c*2*12*b*2*c*12*a*12$

Test Result:  $67+4*a+30*b+3*c+5*d+4*e+48*a*b+24*a*b*d*e+82944*a^2*b*c^2*d+4*a*b^2*c*d*e^2$

*Mathematica:*  $67 + 4 * a + 30 * b + 48 * a * b + 3 * c + 5 * d + 82944 * a^2 * b * c^2 * d + 4 * e + 24 * a * b * d * e + 4 * a * b^2 * c * d * e^2$

Test passed

■ Test: 164

Test Input:  $12+1+4+e+c+0+0+b+2+2*a+12+2+e+4+4+0+1+c+2+a+e*c$

Test Result:  $44+b+3*a+2*c+2*e+c*e$

*Mathematica:*  $44 + 3 * a + b + 2 * c + 2 * e + c * e$

Test passed

■ Test: 165

Test Input:  
 $2+d+c+c+1+0+c+4*e+d+12+2+12+a*a*a+4*12*d*4*c*2*c*c+d*c*4+4+1+0+a$

Test Result:  $34+a+a^3+3*c+2*d+4*e+4*c*d+384*c^3*d$

*Mathematica:*  
 $34 + a + a^3 + 3 * c + 2 * d + 4 * c * d + 384 * c^3 * d + 4 * e$

Test passed

■ Test: 166

Test Input:  
 $c+a+a+0+d*d+12*12+4+2+2+4+b*d*2*b*0*d*2*c*e*c*b+b*e*e*4*0*4*a*4*a*12*c*d*1*4*12*c+4+12+2+d+d*1*4*a*12*b*1*2*2*b*0*1+a+1+b+4+d+0+2*4+e+0+a+c+c+d*e*0*1*1*b*a*1+0+2+d+0+d+d+0*1+e+e+a+b+0+e+c+12+a+1+1+a+c*c*b*4*1*4*d*e*0*4*a*c*2*4*e*2*1*2*1+12*b*4+2+4+1+a+0+d+2+2+e*2*0*e+c+2+2+c+c+2*4+2*2*2*4*4*1*e*e*0*0*b*0*d*e*2*12*0+c+c+b+e+e+2+1$

Test Result:  $229+d^2+8*a+51*b+10*c+6*d+6*e$

*Mathematica:*  $229 + 8 * a + 51 * b + 10 * c + 6 * d + d^2 + 6 * e$

Test passed

■ Test: 167

Test Input:

```
d*4*a*4*b*a*2*e*a+2+c+12+2+4+12+4*a+2+d*e*e*d*d*1*1*e+
b+e+4+12+c+12+12*0*c*b*b*0*2*0+4+c+c+2+d+2+c+
12+d+2*4+b+b+b+a+2+b+12*4+c+4+12+b+a+b+0+d+2+2+
12+12+0*0*2*0*b*a+12*0*a*12*1*b*12*d*c+b+4+0+e+e
```

Test Result:  $188+6*a+8*b+6*c+3*d+3*e+32*a^3*b*d*e+d^3*e^3$

Mathematica:

```
188 + 6*a + 8*b + 6*c + 3*d + 3*e + 32*a^3*b*d*e + d^3*e^3
```

Test passed

■ Test: 168

Test Input:

```
2+e+0+c+2+c+12+b+1+c*e*e*12*b*12*b+e*e*12*12*c*b+b*e*12*0*a*
a*4*4*c*0*1*c*e*0*b*c*b*c*c+e*2*0*b*12*0*0*0*d*e+4+d+c+
0+b*b*a+b+e+e+12+12+0+e+c+c*4*d*d*12+12+c+2+b+0*e*a+b+0+
12*a+1+e+4+a+d+2+c*b*1+4+e+a+12*a+2+2+e+c+2+d+e+c+a*b+2+
b+c+12+2+1*2*4*12*b*4*12*1*0*d*a+d+0+2+2+2+d+0+d+2+0+d+e+
e+4+d+d+c+c+c+b+d*12*12*e*0*4*b*12*b+1+4+2*b+1+a+c+2+2+a+
4*4*2*12*d*4*1*2*b*12+1+c+4*12+a+c+2*1+12+d+a+b+a+2+c+d+c
```

Test Result:  $179+31*a+11*b+17*c+11*d+10*e+2*a*b+36864*b*d+48*c*d^2+144*b*c*e^2+144*b^2*c*e^2$

Mathematica:

```
179 + 31*a + 11*b + 2*a*b + 17*c + 11*d + 36864*b*d +
48*c*d^2 + 10*e + 144*b*c*e^2 + 144*b^2*c*e^2
```

Test passed

■ Test: 169

Test Input:

```
12+2+4+4+d+e+1+b+12+1+c+2+d+12+2+4+0+1+b+a+1+d+d*c*d*0*4*d*
b*e*2*0*e*0*1+e*b*d*0*a*1*0*d*2*12*2*2*c*1*e*12*b*c*2*b
```

Test Result:  $58+a+c+e+2*b+3*d$

Mathematica:  $58 + a + 2*b + c + 3*d + e$

Test passed

■ Test: 170

Test Input:  
 $2 \cdot 1 \cdot 1 + b + 0 + 0 + 2 + b + 4 \cdot 4 \cdot 1 \cdot d \cdot 12 \cdot a \cdot e \cdot 0 + b + 0 + 12 + 1 + e + d + d + 4 + 12 + 2 + 4 \cdot 1 \cdot 1 \cdot 12 \cdot 0 \cdot 2 \cdot a \cdot a \cdot c \cdot 1 \cdot 12 \cdot b \cdot 0 \cdot 0 \cdot 0 \cdot 12 + e + 2 + d + a + b + 0 + e$

Test Result:  $37 + a + 4 \cdot b + 3 \cdot d + 3 \cdot e$

Mathematica:  $37 + a + 4 \cdot b + 3 \cdot d + 3 \cdot e$

Test passed

■ Test: 171

Test Input:  
 $c + 4 \cdot a + c \cdot 1 \cdot 4 \cdot 12 \cdot b \cdot 2 \cdot a \cdot 4 \cdot d + d \cdot 4 \cdot 2 \cdot e \cdot 4 \cdot d \cdot d \cdot 1 \cdot b \cdot 2 \cdot 1 \cdot a + 4 \cdot c \cdot c \cdot 0 \cdot 1 \cdot d \cdot 4 \cdot 12 \cdot 2 \cdot 12 + e \cdot 1 \cdot a \cdot e \cdot d \cdot 2 \cdot c \cdot d \cdot 2 \cdot 2 + 0 + 2 + 1 + 1 + c + 1 + 2 + 1 + d + d + 1 + 4 \cdot c \cdot 2 + 12 + d + b + a + 2 \cdot b \cdot 4 \cdot 0 \cdot a \cdot a \cdot c \cdot a \cdot e + a \cdot 0 \cdot b \cdot 12 + c + e + e + d + c + b + a + d + e + 1 \cdot d \cdot 0 \cdot 0 \cdot b + 12 + c + 4 + 1 + d + 1 \cdot 12 \cdot 2 \cdot b \cdot a \cdot e \cdot 4 \cdot e + b \cdot c \cdot 4 \cdot 4 \cdot 2 \cdot 1 \cdot 12 \cdot d \cdot d \cdot 1 + c \cdot 4 \cdot c \cdot 0 + b + 2 + c + b + d + 1 \cdot a \cdot 0 \cdot d \cdot c \cdot 4 \cdot e \cdot b \cdot d + b + d + d + 2 + b + 2 \cdot e \cdot b \cdot 2 \cdot d \cdot 12 \cdot a \cdot d \cdot 4 \cdot 2 \cdot 0 \cdot 12 \cdot b \cdot a \cdot c + a \cdot a \cdot 12 \cdot 2 \cdot 0 \cdot 12$

Test Result:  $48 + 3 \cdot a + 6 \cdot b + 10 \cdot c + 9 \cdot d + 3 \cdot e + 384 \cdot a \cdot b \cdot c \cdot d + 384 \cdot b \cdot c \cdot d^2 + 96 \cdot a \cdot b \cdot e^2 + 64 \cdot a \cdot b \cdot d^3 \cdot e + 8 \cdot a \cdot c \cdot d^2 \cdot e^2$

Mathematica:  
 $48 + 3 \cdot a + 6 \cdot b + 10 \cdot c + 9 \cdot d + 384 \cdot a \cdot b \cdot c \cdot d + 384 \cdot b \cdot c \cdot d^2 + 3 \cdot e + 64 \cdot a \cdot b \cdot d^3 \cdot e + 96 \cdot a \cdot b \cdot e^2 + 8 \cdot a \cdot c \cdot d^2 \cdot e^2$

Test passed

■ Test: 172

Test Input:  
 $c + e + 4 + d + d + 4 + 2 + 0 + b \cdot c \cdot 4 + c \cdot 0 \cdot 4 \cdot 2 \cdot 2 \cdot c \cdot c \cdot 1 \cdot b + d + 12 + b + 12 + 1 + b \cdot 1 + a + 4 + 1 + 1 + 4 + a + a + 1 + d \cdot e + 1 + 12 + e \cdot 0 + 0 + b + c + c + c + 0 \cdot a + c + 1 + 1 + 1$

Test Result:  $62 + e + 3 \cdot a + 3 \cdot b + 5 \cdot c + 3 \cdot d + 4 \cdot b \cdot c + d \cdot e$

Mathematica:  $62 + 3 \cdot a + 3 \cdot b + 5 \cdot c + 4 \cdot b \cdot c + 3 \cdot d + e + d \cdot e$

Test passed

■ Test: 173

Test Input:  
 $12e+12+1+b+1+0*2*d+1*c*c*e*d*a*d*d*c*d*e*2*e+c*2*e*a*e+4+0+2+e+c+12+a+a+c+d+d+12+a+e+1+1+b+b+a+e+2+a+b*b+b+c+b+0*1+0+a+12+4+a+0+0+b+0+0+e+d+d*12*4*2*2*0+d+0+e+b+4*c+a+b+0+1+c+a+4+c+1+2+4+0*12*4*c*a*2+e*b*d*2*1*0*a*2*a*e*a*12*d+e+e+2+a+1+a$

Test Result:  $91+b^2+11*a+8*b+9*c+4*d+8*e+2*a*c*e^2$

Mathematica:  
 $91 + 11*a + 8*b + b^2 + 9*c + 4*d + 8*e + 2*a*c*e^2$

Test passed

■ Test: 174

Test Input:  $b+b+2+12+e+c+0*0*c*2*e*1*e$

Test Result:  $14+c+e+2*b$

Mathematica:  $14 + 2*b + c + e$

Test passed

■ Test: 175

Test Input:  
 $d+a+d+4+2+12+e+d+e*12*a*b+e+e*c+c+a+0+d+1+12+d*4+b+4+d+12+a+0+0+d+1+b+c+b+d+1+c+b+1*1*2*4*12*b*2*0*4*4+b+0+c+d+e+4+b+c+2+0+a*e*e*4*b*4*1*2*c*0*2*d*b*0*a$

Test Result:  $55+3*a+6*b+5*c+12*d+3*e+c*e+12*a*b*e$

Mathematica:  
 $55 + 3*a + 6*b + 5*c + 12*d + 3*e + 12*a*b*e + c*e$

Test passed

■ Test: 176

Test Input:  $0*d*1*c*a*e*b*4*0*b*b*4*c*e*0*2*12*0*b*b+1+c+c*b*12+b*12*2*e*0+1+4*1*4*d*a+c+b*4*e*c+12+1+12+c+4+a*e*2*2*c*e*1*2*4*e+0+4+c+1+2$

Test Result:  $38+12*b+5*c+16*a*d+4*b*c*e+32*a*c*e^3$

*Mathematica:*  $38 + 12 * b + 5 * c + 16 * a * d + 4 * b * c * e + 32 * a * c * e^3$

Test passed

■ Test: 177

Test Input:  
 $0 * e * b * a * 2 * e * 12 + d * 0 * b * 4 * 0 * d + 4 * d + b + e + 4 + 1 * 1 * 0 * 2 * a * d * c * a * d * 1 * c * 1 * 0 * b * 0 + b + d + 2 * 2 + e + b + e + a + a + e + 12 + 1 * 2 + 2 + 0 + 2 + 4 + b + e * 2 * 0 * e * b * 2 * 4 * b * 12 * 12 * 2 * b * 2$

Test Result:  $34 + 2 * a + 4 * b + 2 * d + 4 * e$

*Mathematica:*  $34 + 2 * a + 4 * b + 2 * d + 4 * e$

Test passed

■ Test: 178

Test Input:  
 $2 * d + 2 * 2 * b + e + e + a + e + 2 * e + d + d + e + b + a + a + e + a + a + 12 * 4 * c * 12 * e * c * b * e * 4 * 12 + 12 * 12 * b + 12 * c * a * a + 2 * e * a * c * 1 * d * d * 12 * d * c * 12 + a + 4 * e + 4 * d + 1 + 0 * 12 * d * 0 * 4 * 2 * e * d * b * a * e * 2 * 1 * b + 4 * 2 + 12 * b + b + e * 0 * 0 * 1 * 12 * 12 * 0 * 2 * c * 4 * 4 * b + c$

Test Result:  
 $71 + c + 6 * a + 6 * b + 4 * d + 7 * e + 12 * a^2 * c + 27648 * b * c^2 * e^2 + 24 * a * c^2 * d^3 * e$

*Mathematica:*  $71 + 6 * a + 6 * b + c + 12 * a^2 * c + 4 * d + 7 * e + 24 * a * c^2 * d^3 * e + 27648 * b * c^2 * e^2$

Test passed

■ Test: 179

Test Input:  $0 + 0 + 2 * e + 1 + 0 * a + 2 * 2 * e + a + d + a + 0 * 1 * e + 2 * e + c + 1 + 2 * b + e + b + a + c$

Test Result:  $10 + d + 4 * a + 3 * b + 2 * c + 5 * e$

*Mathematica:*  $10 + 4 * a + 3 * b + 2 * c + d + 5 * e$

Test passed

■ Test: 180

Test Input:  
 $1*c*b*a*a*1*a*4*12+4+b+b+0+0+1+12*d*2*4*0*0+12*1+d*a+2+2+0+a+12*12+a+2+2+c+4+b+b*4*1*a*e+12*0*e*d+c*e+4*d*e*4+1*1*4*2*4*4*e*12*12*1+e+c+c+a+c+b+d*d+b+1$

Test Result:  
 $174+d^2+3*a+5*b+4*c+18433*e+a*d+16*c*d*e^2+48*a^3*b*c$

*Mathematica:*  $174 + 3*a + 5*b + 4*c + 48*a^3*b*c + a*d + d^2 + 18433*e + 16*c*d*e^2$

Test passed

■ Test: 181

Test Input:  
 $e*a*a*4*1*c*12*d*1*b+c+2+12+4+4+e+2+4+b+12*b*4*2*2*4*a*e*d*c+4+0+2+c+0+2+b+b+a+c+b*2+e+c+0+e+c+e+d+0*c*2*c*2*e*0+a*4*e*c*2+4*4*0*e*2*a*2*a*e*e+c+e+b+1+c+2+12+1+d+c*c*d*4*1*a+b+4+1+b+0+1+b+0$

Test Result:  
 $58+a+9*b+7*c+2*d+5*e+8*a*c*e+4*a*c^2*d+768*a*b*c*d*e+48*a^2*b*c*d*e$

*Mathematica:*  $58 + a + 9*b + 7*c + 2*d + 4*a*c^2*d + 5*e + 8*a*c*e + 768*a*b*c*d*e + 48*a^2*b*c*d*e$

Test passed

■ Test: 182

Test Input:  
 $a+4+2*a*0*12*0*c*4*d*0*d+4+c+c+0+2+c*c*12*1*b+12*e*c*d*12*1*4*c*12+a+b*0*1*d*d*a*2*d*b*1+e+2+a+0+a+12+c+4+c*2*0+12+0*c*2*12*0*b*12*12*c*1*b+12*4*1+c+b+a+b+4+1+12*4*12*12*1*12+e+12+0+1+d+4+1+a+2+4+c*b*c+1+c+b+c+0+12$

Test Result:  
 $83074+d+6*a+3*b+6*c+2*e+13*b*c^2+6912*c^2*d*e$

*Mathematica:*  $83074 + 6*a + 3*b + 6*c + 13*b*c^2 + d + 2*e + 6912*c^2*d*e$

Test passed

■ Test: 183

Test Input:  
 $0+0+0+2+4+0+12+d*4*4*a*e*e*2*2*e*0*d+e+a*a*0*c*a*4*a*e*$   
 $a*d*d+b*c*4*0*4*a*e*e*12*a+a*12+a+a*0*a*2*0*1*2*a*$   
 $12*2*c*a+4+e+e+c+c+0*d*d*b*4*b*0*e*a*c*12*d*2*c+1*d*c$

Test Result:  $22+14*a+2*c+3*e+c*d$

*Mathematica:*  $22 + 14 * a + 2 * c + c * d + 3 * e$

Test passed

■ Test: 184

Test Input:  $a*1*1*0+12*1*e*1*12*2*4*d+0*e*0*d*a*12+d+c+$   
 $b+0+4+a+12+b+c+4*b*0*4*c*e+4*2*a*c*d*c*2+e+b+c+c+1+1$

Test Result:  $18+a+d+e+3*b+4*c+1152*d*e+16*a*c^2*d$

*Mathematica:*  $18 + a + 3 * b + 4 * c + d + 16 * a * c^2 * d + e + 1152 * d * e$

Test passed

■ Test: 185

Test Input:  
 $d+0+e+12+1+b+0+c*d*b*12*e*b*1+0+e+12+d+d+c+b*4*d*e*c*4*1*2*12*4*$   
 $c*0*d+2+4+c+d+1+0+e*e+b+2*1*2*2*c*b+12+4+0+12+a+12+e+d+4*c+0+$   
 $a+4+4+c*c*c+12*12+4+12+b+b+2+2*2*c*1+e*12*1*d*d*1*d*1*12+c+d+$   
 $b+1+1+c+0+12*c*c*2*4+0+d+2*e*e*b*0*a*e*1*d*b*b*2*e*4*4+c+d+0$

Test Result:  
 $244+e^2+2*a+5*b+14*c+8*d+3*e+8*b*c+97*c^2+144*d^3*e+12*b^2*c*d*e$

*Mathematica:*  $244 + 2 * a + 5 * b + 14 * c + 8 * b * c +$   
 $97 * c^2 + 8 * d + 3 * e + 12 * b^2 * c * d * e + 144 * d^3 * e + e^2$

Test passed

■ Test: 186

Test Input:  
 $4*d*2*a*c*1*2*d*e*c*0*b+b+e+b*1*4*4*12*c*0+4*e*12*0*c*1*b*2*d*c*$   
 $d*a*0*c*12*a*a*d*0*a+12+4+2+12+d+e*0+0+12+d+12+d+2+b+a+2+e+e$

Test Result:  $58+a+2*b+3*d+3*e$

*Mathematica:* 58 + a + 2 \* b + 3 \* d + 3 \* e

Test passed

■ Test: 187

Test Input:

d\*0+e+1+4+1+0+2+c+e+4+1+2+1+2\*4\*d\*1\*2\*b\*1\*d\*b\*1+a+c+d\*a\*a\*1\*2\*c\*  
 2\*d\*2+0+2\*a+0+d\*a+4+e+b+2+d+d+2+d+12+4\*a+e+0+e+d+12+0+12+2+  
 1+d+12+12+d\*2+a+c\*4\*a\*0\*d\*a+b+b+2+1+e+12\*c+b+1+4+b+a+2+1+c+  
 d+b+12+4+0+2+c+2+2+2+0+2+1+c+b+c+e+4+c\*d\*b\*e\*d\*d\*0+1+12\*b\*  
 12\*2\*2\*d\*0\*a\*a\*b\*2\*1\*a\*c\*d\*2\*d\*4\*c\*e+4\*e\*12\*a\*b\*0\*c\*e\*0\*4

Test Result: 130+9\*a+7\*b+18\*c+8\*d+7\*e+a\*d+16\*b^2\*d^2+8\*a^2\*c\*d^2

*Mathematica:* 130 + 9 \* a + 7 \* b + 18 \* c +  
 8 \* d + a \* d + 16 \* b ^ 2 \* d ^ 2 + 8 \* a ^ 2 \* c \* d ^ 2 + 7 \* e

Test passed

■ Test: 188

Test Input:

0\*e\*a\*c\*1\*c\*e\*c\*c\*0\*1\*4+b+a+12+2+0+1+4+b\*2+4+e+0\*1\*c\*b\*0\*12\*12\*  
 0\*b\*c+2\*12\*a\*1\*b\*d+0+a+e+2+4\*a\*1\*0+c\*2\*1\*e\*4\*1\*d\*2+b\*e\*0\*12\*  
 1\*a\*4\*2\*e\*1+0+4\*0\*e\*12\*2\*4\*4\*c\*4\*2\*e\*c+e+1+d+12+2+4+b+4+a+1

Test Result: 49+d+3\*a+4\*b+3\*e+24\*a\*b\*d+16\*c\*d\*e

*Mathematica:* 49 + 3 \* a + 4 \* b + d + 24 \* a \* b \* d + 3 \* e + 16 \* c \* d \* e

Test passed

■ Test: 189

Test Input:

4+a+1+1+12+0+e+c+a+1+12+12+e+4+a+e+a+2+2\*0+e+2+12+b\*b\*0\*b\*4\*c\*e\*  
 4+c\*a\*2\*2\*12\*e\*2\*4\*0+2+a+12+b+4+12\*e\*b\*c\*e\*0\*a\*b\*4\*4\*b\*a\*a\*  
 c\*2\*1\*2\*e\*a\*2\*e\*0\*12\*a\*4+4+1+12+1\*4\*1\*b+e+2+d+e+12+a+12+12+  
 2+2\*c+c+1+12+c+0+4+b+b+4\*e+12+c+1+a+e+c\*12\*a\*4\*0\*1\*0\*2\*b\*c+  
 a+4+2+12+4\*0\*d\*c\*c+e\*d\*0\*1\*1\*0\*12\*a+a+b+0+4+d+e+12+12+d+4+  
 1+4+2+e\*2+12+a\*2\*b\*e\*12\*b\*c\*1\*12\*1\*b\*0\*2+e\*b\*c\*1\*0\*4\*b\*a\*a

Test Result: 237+9\*a+8\*b+6\*c+3\*d+14\*e

*Mathematica:* 237 + 9 \* a + 8 \* b + 6 \* c + 3 \* d + 14 \* e

Test passed

■ Test: 190

Test Input:  
 $e \cdot d \cdot 0 \cdot 2 \cdot e \cdot b + e \cdot c \cdot a \cdot d \cdot 2 \cdot 4 \cdot a \cdot 1 \cdot 2 \cdot a + e \cdot 0 \cdot 2 \cdot 2 + c \cdot a \cdot 4 + e \cdot b \cdot 1 \cdot 1 \cdot 4 \cdot 0 \cdot 12 \cdot b \cdot c \cdot a \cdot 0 \cdot a \cdot e \cdot 1 \cdot 1 \cdot b \cdot b \cdot 12 \cdot c \cdot 1 \cdot a \cdot 2 \cdot d \cdot e \cdot 2 \cdot 0 \cdot 12 \cdot b + c \cdot b \cdot 12 \cdot 1 \cdot b \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 12 \cdot 0 \cdot d \cdot 0 \cdot d \cdot a \cdot d \cdot a \cdot c \cdot e \cdot 1 \cdot a \cdot a \cdot c \cdot c \cdot e \cdot 12 \cdot 2 \cdot b \cdot 12 \cdot 1 \cdot 0 \cdot d \cdot c \cdot d \cdot 4 \cdot 4 \cdot a \cdot a \cdot d \cdot e \cdot c \cdot 1 \cdot 0 \cdot e \cdot 4 \cdot d \cdot 4 \cdot a \cdot 4 \cdot b \cdot 1 + e \cdot e \cdot 2 \cdot a + e \cdot b + a \cdot c + b \cdot b \cdot d + 2 \cdot a \cdot 2 \cdot e \cdot c \cdot a \cdot e \cdot 2 \cdot 4 \cdot 4 \cdot 2 \cdot 2 \cdot d \cdot 1 \cdot d \cdot e \cdot c \cdot 2 \cdot 12 \cdot 0 \cdot 12 + e \cdot d + e \cdot 2 + e \cdot e \cdot a + b \cdot b \cdot 1 + 0 \cdot 0 + d \cdot e \cdot 0 + c \cdot 12 + e \cdot 1 + 12 \cdot 0 \cdot d \cdot a \cdot 2 \cdot 12 \cdot 12 \cdot a \cdot 2 \cdot b \cdot 1 \cdot 4 \cdot 12 \cdot 2 + d \cdot 12 + c \cdot 12 + c \cdot b + e \cdot d + d \cdot 12 + 1 \cdot e \cdot 2 + 0 \cdot b + e \cdot a + a \cdot 0 \cdot 12 \cdot 12 \cdot b \cdot 12 \cdot b \cdot a \cdot a$

Test Result:  
 $87 + 4 \cdot a + 8 \cdot b + 4 \cdot c + 6 \cdot d + 12 \cdot e + a \cdot c + 16 \cdot a \cdot b \cdot d + 2 \cdot a \cdot e^2 + 16 \cdot a^3 \cdot c \cdot d \cdot e$

Mathematica:  $87 + 4 \cdot a + 8 \cdot b + 4 \cdot c + a \cdot c + 6 \cdot d + 16 \cdot a \cdot b \cdot d + 12 \cdot e + 16 \cdot a^3 \cdot c \cdot d \cdot e + 2 \cdot a \cdot e^2$

Test passed

■ Test: 191

Test Input:  $0 + 4 \cdot e + e \cdot 2 + e \cdot a \cdot 0 \cdot 0 \cdot d \cdot c \cdot 1 \cdot d \cdot 12$

Test Result:  $6 + 2 \cdot e$

Mathematica:  $6 + 2 \cdot e$

Test passed

■ Test: 192

Test Input:  
 $e \cdot 0 \cdot 12 \cdot 1 \cdot 12 \cdot 0 \cdot a \cdot b + 0 \cdot 12 + e \cdot 4 \cdot 0 \cdot 12 + 4 \cdot 12 \cdot 2 \cdot a \cdot b \cdot 1 \cdot 2 \cdot b \cdot 12 \cdot c \cdot a \cdot 4 \cdot b \cdot 1 \cdot a \cdot a \cdot c \cdot 1 \cdot c \cdot b \cdot b \cdot c \cdot 2 \cdot a + e \cdot e \cdot c \cdot d \cdot 1 \cdot c \cdot 4 \cdot c \cdot c + d \cdot 2 + e \cdot a \cdot b \cdot 4 \cdot 12 \cdot a \cdot 4 \cdot 2 \cdot e \cdot 4 \cdot 4 \cdot 12 \cdot 0 \cdot 0 \cdot 4 \cdot d \cdot d \cdot b \cdot 4 \cdot 2 + 2 \cdot 12 + a \cdot c + b \cdot d \cdot 4 \cdot d \cdot 0 \cdot 12 \cdot d \cdot b \cdot 2 + c \cdot e \cdot c \cdot 4 + a \cdot d \cdot d \cdot c \cdot 2 \cdot a$

Test Result:  $58 + b \cdot d + 2 \cdot a + 4 \cdot c + 3 \cdot e + a \cdot b + 73728 \cdot a \cdot e + 2 \cdot a \cdot c \cdot d^2 + 576 \cdot a^2 \cdot b^2 \cdot c + 4 \cdot c^3 \cdot d \cdot e^2 + 8 \cdot a^3 \cdot b^3 \cdot c^3$

Mathematica:  
 $58 + 2 \cdot a + b + a \cdot b + 4 \cdot c + 576 \cdot a^2 \cdot b^2 \cdot c + 8 \cdot a^3 \cdot b^3 \cdot c^3 + d + 2 \cdot a \cdot c \cdot d^2 + 3 \cdot e + 73728 \cdot a \cdot e + 4 \cdot c^3 \cdot d \cdot e^2$

Test passed

■ Test: 193

Test Input:  
 $b \cdot e \cdot a \cdot c + 0 \cdot b + a + e + 1 \cdot b + 4 \cdot 0 \cdot 4 + a + d + 0 + 12 + 12 + 0 + 0 + b + 12 + 0 + c + d + 1 + c + a \cdot e \cdot a \cdot c \cdot 2 \cdot c \cdot 4 \cdot 1 + 4 + e \cdot b \cdot 12 \cdot 2 \cdot 12 \cdot b \cdot b + b \cdot 0 \cdot 4 \cdot 4 \cdot 0 \cdot a \cdot b \cdot d \cdot 0 \cdot d \cdot b \cdot 1 \cdot e$

Test Result:  $46 + e + 2 \cdot a + 3 \cdot b + 2 \cdot c + 2 \cdot d + a \cdot b \cdot c \cdot e + 288 \cdot b^3 \cdot e + 8 \cdot a^2 \cdot c^2 \cdot e$

*Mathematica*:  $46 + 2 \cdot a + 3 \cdot b + 2 \cdot c + 2 \cdot d + e + 288 \cdot b^3 \cdot e + a \cdot b \cdot c \cdot e + 8 \cdot a^2 \cdot c^2 \cdot e$

Test passed

■ Test: 194

Test Input:  
 $1 \cdot b \cdot 0 \cdot 1 \cdot 12 \cdot 4 \cdot a \cdot 4 \cdot d \cdot d \cdot 4 \cdot 4 \cdot d \cdot d \cdot 2 \cdot a \cdot d \cdot 4 \cdot e \cdot 12 \cdot 2 \cdot d \cdot b \cdot d \cdot e \cdot e \cdot d \cdot 1 \cdot e \cdot e + a \cdot b + d + d + 2 \cdot e \cdot 0 \cdot a + 4 \cdot 4 \cdot 12 \cdot 4 \cdot 2 + d + e + d \cdot 12 \cdot a \cdot 0 \cdot 0 \cdot e \cdot b \cdot 4 \cdot 2 \cdot 1 \cdot c \cdot 4 + d + e + e + b + 4 + a + 0 + b \cdot 2 \cdot e \cdot e \cdot 1 \cdot 1 \cdot 12 \cdot 4 \cdot 12 + a \cdot a \cdot c \cdot 12 \cdot 4 + 4 + c + b + b + 1 + c + 0 + 2 + a + a \cdot 12 \cdot b \cdot 12 \cdot b \cdot 2 \cdot e \cdot a \cdot e \cdot 2 \cdot e + 12 + 1 + e + c + 12 + 2$

Test Result:  
 $1574 + 3 \cdot a + 4 \cdot b + 3 \cdot c + 4 \cdot d + 4 \cdot e + 48 \cdot a^2 \cdot c + 1152 \cdot b \cdot e^2 + 576 \cdot a^2 \cdot b^2 \cdot e^3$

*Mathematica*:  $1574 + 3 \cdot a + 4 \cdot b + 3 \cdot c + 4 \cdot d + 4 \cdot e + 1152 \cdot b \cdot e^2 + 576 \cdot a^2 \cdot b^2 \cdot e^3$

Test passed

■ Test: 195

Test Input:  $e \cdot b \cdot 4 \cdot 12 \cdot d \cdot c \cdot d \cdot 2 + c + d + 12 + 1 + 1 + 4 + 4 + e + a + b + 12 + 0$

Test Result:  $34 + a + b + c + d + e + 96 \cdot b \cdot c \cdot d^2 \cdot e$

*Mathematica*:  $34 + a + b + c + d + e + 96 \cdot b \cdot c \cdot d^2 \cdot e$

Test passed

■ Test: 196

Test Input:  
 $2 \cdot 2 \cdot 1 \cdot 4 \cdot 4 \cdot 4 \cdot 0 + b + c + 0 + 0 + 1 \cdot c \cdot 2 \cdot b \cdot 12 \cdot 1 \cdot e + c \cdot b \cdot 2 \cdot e \cdot a + d + 2 + 12 + e + 2 + a \cdot 12 \cdot 0 \cdot e + b + 0 + 1 + 1 + 4 + 2 + e + 2 + e + c + 2 \cdot 12 \cdot 0 \cdot 2 \cdot e + 2 \cdot 1 \cdot a \cdot 0 \cdot 1 + 12 + 4 + a + 1 + e + 1 + 0 + d + 1 + 2 + c + 12 + d + c + 2 + d \cdot 2 + e + c + 12 \cdot b \cdot 1 + e + 4 + e + 4 + 0 \cdot 12 \cdot e \cdot c \cdot b \cdot 2 \cdot 12 \cdot b \cdot b \cdot e \cdot b + b \cdot b \cdot 1 \cdot c \cdot e \cdot e \cdot 12 \cdot b + b + d + 1 \cdot b + a + 4 + a + 4 \cdot 4 + c + d + a + b + 0 \cdot c + 4 + c + 0 + e + a + e + 12 + 0 + b + 4 \cdot 12 \cdot 2 \cdot c \cdot e \cdot 0 \cdot 1 \cdot b \cdot 12$

Test Result:  
 $105 + 5*a + 18*b + 7*c + 7*d + 9*e + 24*b*c*e + 2*a*b*c*e + 12*b^3*c*e^2$

*Mathematica:*  $105 + 5*a + 18*b + 7*c + 7*d + 9*e + 24*b*c*e + 2*a*b*c*e + 12*b^3*c*e^2$

Test passed

■ Test: 197

Test Input:  
 $d*2*0*12+0+a+b+b+2+1+12+0+1+1+0+c+4+4+12+d+12*a+1+d+c+b*12*b*c+b*0*b*c*0*12*a*d*12*a*e*0*1+12+a+e+12+12+2+a+0*0*4*c*e*d*c*e+b+b+e+e+0+2+a+c+4+2+4+a+2*4*b*2*0*b*c+b*1*e*12*12*1*12*4*b*d*12*12*c*b*b*12+d*e*e*1*d*12*1*1*a*4+b+a+12+d*d*4*0*e*12*4*2*d+e+d+1+e+4+e+c*c+0+a+4+4+4+d+2+e+12+1+c+12+2+c*4+2+2+1+a+c+a*2+1+12+c+b+12+a+c+e+2+4+b+0+e+c+a+0+0+4+12*e*a*2*c*2*d*2*a*e*4+0+2+e*b+c+12+12+b+2+0+0+a+0+a+c+b$

Test Result:  $214+c^2+26*a+9*b+14*c+5*d+9*e+b*e+12*b^2*c+48*a*d^2*e^2+384*a^2*c*d*e^2+11943936*b^4*c*d*e$

*Mathematica:*  
 $214 + 26*a + 9*b + 14*c + 12*b^2*c + c^2 + 5*d + 9*e + b*e + 11943936*b^4*c*d*e + 384*a^2*c*d*e^2 + 48*a*d^2*e^2$

Test passed

■ Test: 198

Test Input:  
 $e+0+b+d+a+1+0+d+2+a+12+b+d+2+a+0+d+a+d*4+1*12+1+2+2*b+12+d+4+0+4*a*b+12+b+b+4+12+c+e*d+1+1+2+b+c+4*c*e*12*a*d*e*c*0*1+c*1*b*1+b*a*e*2*a+e+12+a+1+b+e+c+2+4+2+1+b+e*a*c*c*0*2*e*b*e+2+e+2*a*0*a*2*4+e+e+c+1+d+0+2+a+c+c+2+d*a*e*12*12*a*b*1*b*2+12+0+b+2+b*d*4*d*b*4*4*c*b*2*12*12*b*e*4*4*12+d+d+a+1+c+12+c+1+b*4*0*d*c*b*d*1*c$

Test Result:  $136+7*a+10*b+8*c+12*d+6*e+4*a*b+b*c+d*e+2*a^2*b*e+288*a^2*b^2*d*e+3538944*b^4*c*d^2*e$

*Mathematica:*  
 $136 + 7*a + 10*b + 4*a*b + 8*c + b*c + 12*d + 6*e + 2*a^2*b*e + d*e + 288*a^2*b^2*d*e + 3538944*b^4*c*d^2*e$

Test passed

■ Test: 199

Test Input:  $12*d$

```
Test Result: 12*d
```

```
Mathematica: 12 * d
```

Test passed

### ■ Test Summary

Test finished at 2006-12-16 23:19:29.234426.

200 Test(s) performed.

200 Test(s) have passed.

0 Test(s) have failed.