

```
1: #!/afs/cats.ucsc.edu/courses/cmps112-wm/usr/smalltalk/bin/gst -f
2: RCSID := '$Id: arithmetic.st,v 1.2 2012-02-23 19:15:05-08 -- $'.
3:
4: execname := '$RCSfile: arithmetic.st,v $' =~ '.*: (.*) ,v.*' at: 1.
5: nl := Character nl.
6:
7: ""
8: "There are only three precedences in Smalltalk"
9: "1. unary"
10: "2. binary - strictly left to right"
11: "3. keyword"
12: ""
13:
14: stdout << 'x := 3 + 4 * 5.' << nl.
15: x := 3 + 4 * 5.
16: x inspect.
17: stdout << x << nl.
18:
19: ""
20: "Smalltalk has extended precision."
21: ""
22:
23: stdout << 'y1 := 64 raisedTo: 20.' << nl.
24: y1 := 64 raisedTo: 20.
25: y1 inspect.
26: stdout << y1 << nl.
27:
28: stdout << 'y2 := 6 * 6 raisedTo: 3 * 4.' << nl.
29: y2 := 6 * 6 raisedTo: 3 * 4.
30: y2 inspect.
31: stdout << y2 << nl.
32:
33: ""
34: "Rational numbers."
35: ""
36:
37: stdout << 'z := 22/7.' << nl.
38: z := 22/7.
39: z inspect.
40: stdout << z << nl.
41:
42: "TEST: arithmetic.st"
43:
```

```
1: *****mks***** arithmetic.st 2>&1
2: x := 3 + 4 * 5.
3: An instance of SmallInteger
4: 35
5: y1 := 64 raisedTo: 20.
6: An instance of LargePositiveInteger
7: [1]: 0
8: [2]: 0
9: [3]: 0
10: [4]: 0
11: [5]: 0
12: [6]: 0
13: [7]: 0
14: [8]: 0
15: [9]: 0
16: [10]: 0
17: [11]: 0
18: [12]: 0
19: [13]: 0
20: [14]: 0
21: [15]: 0
22: [16]: 1
23: 1329227995784915872903807060280344576
24: y2 := 6 * 6 raisedTo: 3 * 4.
25: An instance of LargePositiveInteger
26: [1]: 0
27: [2]: 0
28: [3]: 0
29: [4]: 225
30: [5]: 184
31: [6]: 28
32: [7]: 194
33: [8]: 65
34: 4738381338321616896
35: z := 22/7.
36: An instance of Fraction
37: numerator: 22
38: denominator: 7
39: 22/7
40: *****status: 0x0000
41:
```