1 Testing LaTeX Counters

```
Counter Foo [0] = 0.

Increment Foo[1] = 1.

Set Foo to 2 = 2.

Add 10 to Foo [12] = 12.

Double Foo [24] = 24.
```

1.1 Testing RefStep

```
Define bar to be reset within foo. Now (Foo,Bar)[24,0] is (24,0)
Refstep bar: Now (Foo,Bar)[24,1] is (24,1)
Refstep foo: Now (Foo,Bar)[25,0] is (25,0)
```

1.2 Number formatting

2 Expanding LaTeX Counter Names

```
Counter Foo [0] = 0.

Increment Foo[1] = 1.

Set Foo to 2 = 2.

Add 10 to Foo [12] = 12.

Double Foo [24] = 24.
```

2.1 Testing RefStep

```
Define bar to be reset within Foo. Now (Foo,Bar)[24,0] is (24,0)
Refstep Bar: Now (Foo,Bar)[24,1] is (24,1)
Refstep Foo: Now (Foo,Bar)[25,0] is (25,0)
```

2.2 Number formatting

```
\begin{aligned} & \operatorname{arabic}[6] = 6 \\ & \operatorname{roman}\left[\operatorname{vi}\right] = \operatorname{vi} \\ & \operatorname{Roman}\left[\operatorname{VI}\right] = \operatorname{VI} \\ & \operatorname{alph}\left[f\right] = f \\ & \operatorname{Alph}\left[F\right] = F \\ & \operatorname{fnsymbol}\left[\|\right] = \| \end{aligned}
```

3 TeX Counters

3.1 Integers

```
7 = 7.
7 = 7.
```

3.2 Dimensions

```
HFuzz is 0.1pt. Now HFuzz is 2.0pt.

HFuzz is 2.0pt. Now HFuzz is 2.0pt.

Dimen 1.23pt = 1.23pt.

Dimen 1.23pt = 1.23pt.

Dimen 1.23pt = 1.23pt.

count 2: 3*65536 = 196608.

Now dimen: 3pt = 3.0pt

One em = 10.00002pt

One ex = 4.30554pt

Dimen: one ex = 4.30554pt

Dimen: 1pt = 1.0pt

Dimen: 1pt = 1.0pt

8 pt = 8.0pt

15 pt = 15.0pt

Catcodes? 15.0 POINTS = 15.0 POINTS
```

3.3 Glue

```
1pt plus 3pt = 1.0pt plus 3.0pt

1pt plus 3fil = 1.0pt plus 3.0fil

1pt plus 3fill = 1.0pt plus 3.0fill

Skip: 2pt plus 3fill = 2.0pt plus 3.0fill

0.1pt plus 3fill = 0.1pt plus 3.0fill

Catcodes? 1.0 POINTS PLUS 3.0 POINTS = 1.0 POINTS PLUS 3.0

POINTS
```

3.4 Undefined?

Unknown count: 0 = 0Unknown dimen: 0pt = 0.0ptUnknown skip: 0pt = 0.0pt

3.5 The

the count 127 [99]: 99 the two (countdef 2)[196608]: 196608 Tokens: abFOOcd = abFOOcdCatcode: 11 = 11 Catcode: 12 = 12

3.6 New Count, etc

3 = 3

3.7 LATEX style

 $1 \text{em} = 10.00002 \text{pt} \ 3 \text{em} = 30.00005 \text{pt}$

3.8 Macrology

```
1=1\\ [23=23]\\ [29=29]\\ [29=29]\\ [10000=10000] \ [\$a\$ = \$a\$]
```