

[6.11] Rounding floating point numbers

To round a floating point number n for further use in calculations, use

```
expr(format(n, fcode))
```

where $fcode$ is a format string. To round a number to a specific number of fractional decimal digits, use $fcode$ of "Fd", where 'd' is the number of digits. For example, for three fractional digits, use

```
expr(format(1.23456789, "F3"))
```

which returns 1.235

To round a number to a given number of significant digits, use $fcode$ of "Sd", where $(d + 1)$ is the number of significant digits. For example, for 6 significant digits, use

```
expr(format(1.23456789E10, "S5"))
```

which returns 1.23457E10

This method works by using the `format()` function to do the rounding, then using `expr()` to convert the string result back to a number. The distinction between fractional digits and significant digits is made by using "Fd" for fixed format, or "Sd" for scientific format.

(Credit to Andrew Cacovean)