

[6.64] Calculate through undef and get correct results

In some cases you can calculate with *undef* values and still get the correct result. Suppose we want to find the reciprocal of the sum of reciprocals of numeric list elements, like this:

```
1/sum(1/list)
```

where *list* is the list of elements. This calculation is used to find the equivalent resistance of a set of parallel resistors, where the list elements are the individual resistance values. Suppose *list* = {2,4,6,12}, then the expression returns 1 as expected. But if *list* = {2,4,6,12,0}, then the expression above returns the correct result of zero, even though manually performing the individual calculations results in *undef*.

1/list	returns	{1/2, 1/4, 1/6, 1/12, undef}
sum({1/2, 1/4, 1/6, 1/12, undef})	returns	undef
1/undef	returns	undef

Evidently, the calculator reorganizes the expression to avoid the division by zero.