

[6.44] Nest `min()` in `max()` to limit an argument

You can limit an argument to two bounds *upper* and *lower*, with this expression:

```
max(lower,min(x,upper))
```

For example, suppose we have a calculation in which we calculate the real inverse sine (arcsine) of the result of a previous calculation. Round-off errors in that calculation may result in an argument x whose absolute value is slightly greater than 1, so finding the inverse sine of the argument will result in an error, or a complex result. We can avoid this by finding the inverse sine of

```
max(-1,min(x,1))
```

If x is between -1 and 1, inclusive, then the expression returns x . If x is less than -1, the expression returns -1, and if x is greater than 1, the expression returns 1. This same result can be obtained with an *If ... EndIf* structure, or as a *when()* function, but this form is more concise.