

As seen in Exercise 2.14, $\frac{A}{A}$ does not return precisely 1, which algebraically would be the reduction of something divided by itself. This is because the way we defined `div-interval` will magnify uncertainty that is present in an interval, even if the intervals are equivalent. So it is not the same as performing a division by itself that you would expect. Only when the interval has no width, which is the case for the one interval in `par2`, will uncertainty not be compounded by an interval operation. This also explains the first part of Exercise 2.16, the latter of which will not be attempted. The task to eliminate this seems difficult because intervals themselves represent a range of values, so two identical intervals could contain different values, which is why error bounds increase when repeated operations occur.

In a way Eva is right, because the second method only makes calculations with uncertain numbers once, when adding the two intervals in the denominator, which will produce a tighter error bound. Whether that is “better” or not depends on how much error the user wants.