|  |  |
| --- | --- |
| To take the second time derivative of the bookkeeper’s velocity formula, let us first write this as a differential form. Then we can take the total derivative of both sides: |  |
| First, let us relabel these quantities to make the product rule simpler: | Let: |
| Then, expanding the product rule, we obtain: |  |
| Undoing the substitution and simplifying: |  |
| Simplify: |  |
| Solve for : |  |

What if is a -form:

Then