

`with_elements(pass())`  $\Leftrightarrow$  `pass()`



`with_column(k, pass())`  $\Leftrightarrow$  `pass()`



$$\text{chain\_of}(\text{with\_elements}(p), \text{with\_elements}(q)) \Leftrightarrow \text{with\_elements}(\text{chain\_of}(p, q))$$



$$\text{chain\_of}(\text{with\_column}(k, p), \text{with\_column}(k, q)) \Leftrightarrow \text{with\_column}(k, \text{chain\_of}(p, q))$$



$$\text{chain\_of}(\text{with\_column}(i, p), \text{with\_column}(j, q)) \Leftrightarrow \text{chain\_of}(\text{with\_column}(j, q), \text{with\_column}(i, p)) \quad i \neq j$$



$\text{chain\_of}(p, \text{filler}(x)) \Leftrightarrow \text{filler}(x)$



$$\text{tuple\_of}(p, \dots, p) \Leftrightarrow \text{chain\_of}(p, \text{tuple\_of}(\text{pass}(), \dots, \text{pass}()))$$



$$\text{chain\_of}(\text{tuple\_of}(p_1, \dots, p_N), \text{column}(k)) \Leftrightarrow p_k$$



$\text{chain\_of}(\text{wrap}(), \text{lift}(f)) \Leftrightarrow \text{lift}(f)$



$$\text{chain\_of}(\text{with\_column}(k, \text{wrap}()), \text{distribute}(k)) \Leftrightarrow \text{wrap}()$$





$$\text{chain\_of}(\text{distribute}(k), \text{with\_elements}(\text{column}(k))) \Leftrightarrow \text{column}(k)$$



$\text{chain\_of}(\text{wrap}(), \text{flatten}()) \Leftrightarrow \text{pass}()$



$\text{chain\_of}(\text{with\_elements}(\text{wrap}()), \text{flatten}()) \Leftrightarrow \text{pass}()$



$\text{chain\_of}(\text{with\_elements}(\text{flatten}()), \text{flatten}()) \Leftrightarrow \text{chain\_of}(\text{flatten}(), \text{flatten}())$





$\text{chain\_of}(\text{wrap}(), \text{with\_elements}(p)) \Leftrightarrow \text{chain\_of}(p, \text{wrap}())$



chain\_of(wrap(), flatten())  $\Leftrightarrow$  pass()



Example

