```
Let w be a fresh tensor variable.
Replace S' with (A_K \oplus = w_I) where (w_I \oplus = E).
for j in J, from innermost to outermost \forall do
    Note that S' is of the form S'_C where S'_P.
    if j is used in both S'_C and S'_P and j \in I then
        Replace \forall_j S' with (\forall_j S'_C) where (\forall_j S'_P)
    else if j is used only in S'_C then
        Replace \forall_j S' with (\forall_j S'_C) where S'_P
    else if j is used only in S'_P then
        Replace \forall_j S' with S'_C where (\forall_j S'_P)
    else
        Error.
    end if
end for
```