V1x: lower-right

V2x: upper-right
V3x: upper-left

V4x: lower-left
V1o: lower-right

V2o: upper-right
Any window has a token in the lower-left corner as well as another in its upper row of panes. Each window has a token. The grid contains both type and conflict tokens.
Any pane: the same type occurs in multiple tokens of the same type occur in any pane.

Duplication

Basement

Any token exists in the lower row of windows.
Pxo: x & o cancel

\[ \circ \quad (\equiv) \quad \times \]

An \( \circ \) and \( \times \) token in the same pane cancel each other out.

Vertical Refactor

Any token may be moved vertically to the corresponding pane in the window above or below.
**Rotate 2-to-1 CCW**

2 tokens of the same type may be replaced with 1 in the adjacent CCW pane & vice-versa.

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**H24: Horiz. Slash-dot**

For any 2 horizontally adjacent windows, 2 identical tokens forming a slash can be replaced with 1 in the lower right pane of the adjacent window & vice-versa.
Exercise 1: Eliminate Smells

Exercise 2: Eliminate Smells
Exercise 3: Eliminate Smells

Exercise 4: Eliminate Smells
A game created by William Wake designed to give a feel for refactoring in a simple non-code domain
http://xp123.com
card adaptation by Michael Wainer