Consider regions of the plane that can contain all n-ominoes up to dihedral action.

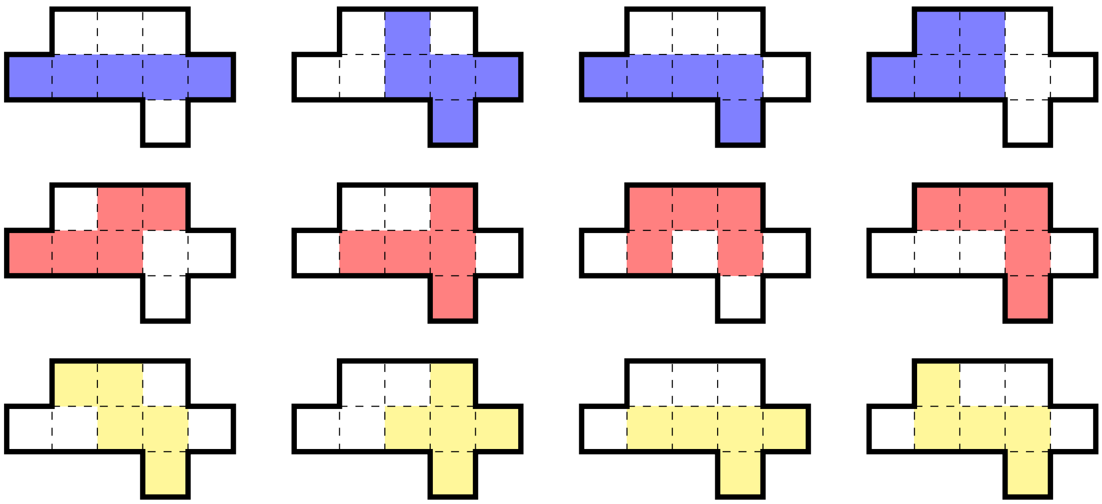

Figure 1: A computer search has proven that a nine-cell region of the plane is the smallest possible region that contains all 5-ominoes.

Question. What is the smallest region of the plane (with respect to area) that can contain all free n-ominoes?

Related.

1. How about other polyforms?
2. What about fixed polyominoes? One-sided polyominoes (those that can be rotated but not flipped)?
3. What about other polyforms such as polyhexes or polycubes?
4. How many distinct minimal covering sets (call this $c(n)$)?
5. What if the region must be convex?
6. What is the asymptotic growth in area of such a region? (Somewhere between linear and quadratic.)
7. Is there a limiting shape?
8. Alec Jones wonders if there always exists a covering set such that a single cell is used by all polyominoes.

Note. If $c(n)$ counts the number of distinct minimal covering sets of n-ominoes, then $c(1) = c(2) = c(3) = 1$, $c(4) = c(5) = 2$, and $c(6) = 14$.

References.

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`https://en.wikipedia.org/wiki/Moser%27s_worm_problem`