

# Pentominoes Plus Worksheet

Note to teachers – You have permission to copy this worksheet for use in your own classroom only. You may want to make multiple copies, so each student has a clean grid for each of the four tessellations.

A shape tiles or tessellates the plane if multiple copies of it can cover the plane without gaps or overlaps. Each of the shapes (tiles) in your puzzle will tile the plane. An example is given at right. Using the grid below, the scale of which matches your puzzle pieces, show how to tile the plane with multiple copies of each of the three tiles below.

For the middle tile, see if you can find a tessellation in which all of the tiles have the same orientation, and a second tessellation in which half of the tiles are mirrored with respect to the other half.

After you've drawn each tessellation, color it so that no two adjacent tiles (touching along an edge, not just at a point) have the same color. How many colors are required for each tessellation?

