

Math 118 - Dr. Miller - Activity #3: Pythagorean Theorem on a Grid

Consider the figure below, where the horizontal or vertical distance between adjacent dots is 1 mm. We want to find its perimeter.

Remember: on a grid, ALL SLANTS must be computed by using the Pythagorean Theorem. Slanted distances between dots are ALWAYS longer than just straight horizontal or vertical counting. It's useful to redraw an appropriate triangle off to the side for each new slant.

For easier organization, label each side alphabetically, beginning with a on the extreme left and moving clockwise, giving each side a new letter name as you go. We see then that the *Total Perimeter* = $a + b + c + d + e + f$, and clearly $a = 4$. Let's find b together, then you should finish the computation in your groups.

