## Area of Shapes Not Drawn on Grid

To find the area of a polygon that is not draw on a grid, we often need to draw altitudes and measure the length of various line segments.

1. First, choose one of the sides as the base. It can be any side!
2. Draw the altitude. Use a protractor or a triangular ruler to draw the altitude so that it goes through one vertex and is perpendicular to the base. See the illustration.
Line up the $90^{\circ}$-mark on the protractor with the base of the triangle and slide it until the line you draw will pass through the vertex.
3. Measure the lengths of the altitude and base as precisely as you can with a ruler.
4. Calculate the area.
5. Find the area of this triangle in square centimeters. Round your final answer to the nearest whole square centimeter.

6. Draw your own triangle here, and find its area!


