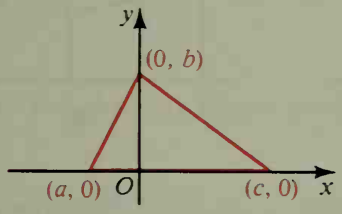
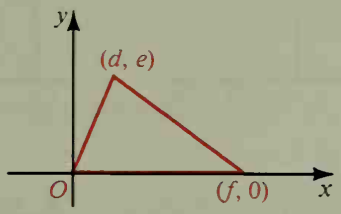
Notice that $2a$ and $2b$ are convenient choices for coordinates since they lead to expressions that do not contain fractions for the coordinates of M.

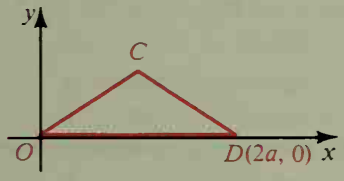
If you have a right triangle, such as $\triangle POR$ on page 556, the most convenient place to put the x-axis and y-axis is usually along the legs of the triangle. If a triangle is not a right triangle, the two most convenient ways to place your axes are shown below. Notice that these locations for the axes maximize the number of times zero is a coordinate of a vertex.



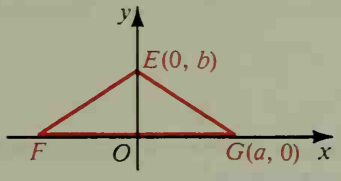


Some common ways of placing coordinate axes on other special figures are shown below.

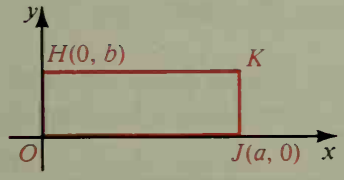
$\triangle COD$ is isosceles; $CO = CD$.
Then C can be labeled (a, b).



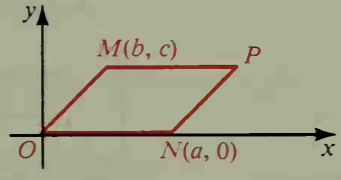
$\triangle EFG$ is isosceles; $EF = EG$.
Then F can be labeled $(-a, 0)$.



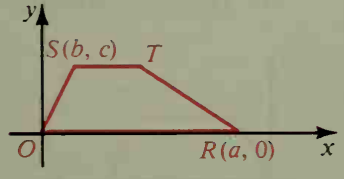
$HOJK$ is a rectangle.
Then K can be labeled (a, b).



$MONP$ is a parallelogram.
Then P can be labeled $(a + b, c)$.



$ROST$ is a trapezoid.
Then T can be labeled (d, c).



$UOVW$ is an isosceles trapezoid.
Then W can be labeled $(a - b, c)$.