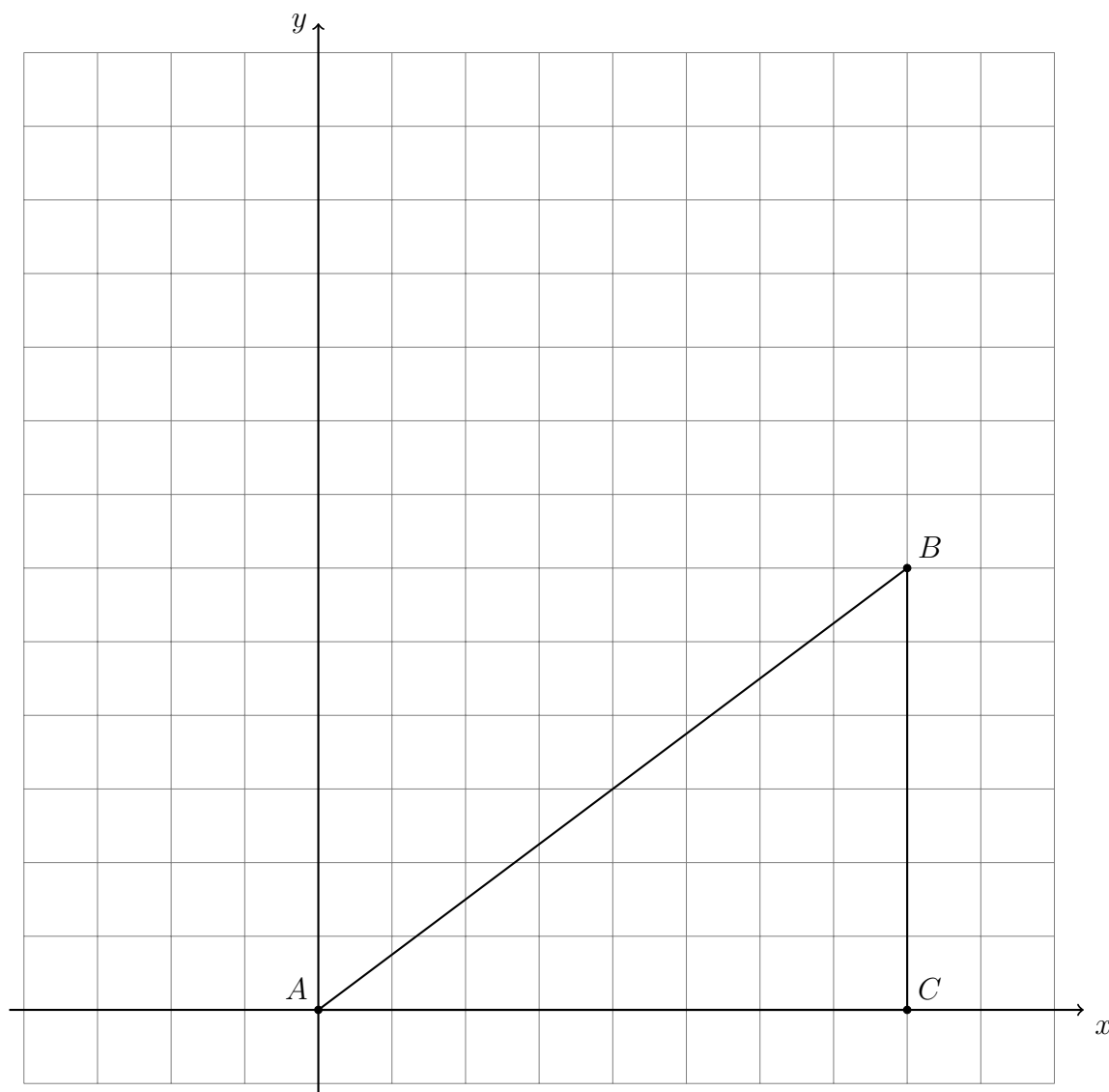


6-4DN-parabola-translation

1. Below, right $\triangle ABC$ is shown in standard position with $A(0,0)$, $B(8,6)$, and $C(8,0)$.

Measure the lengths of the sides of the triangle in centimeters and mark them on the diagram.

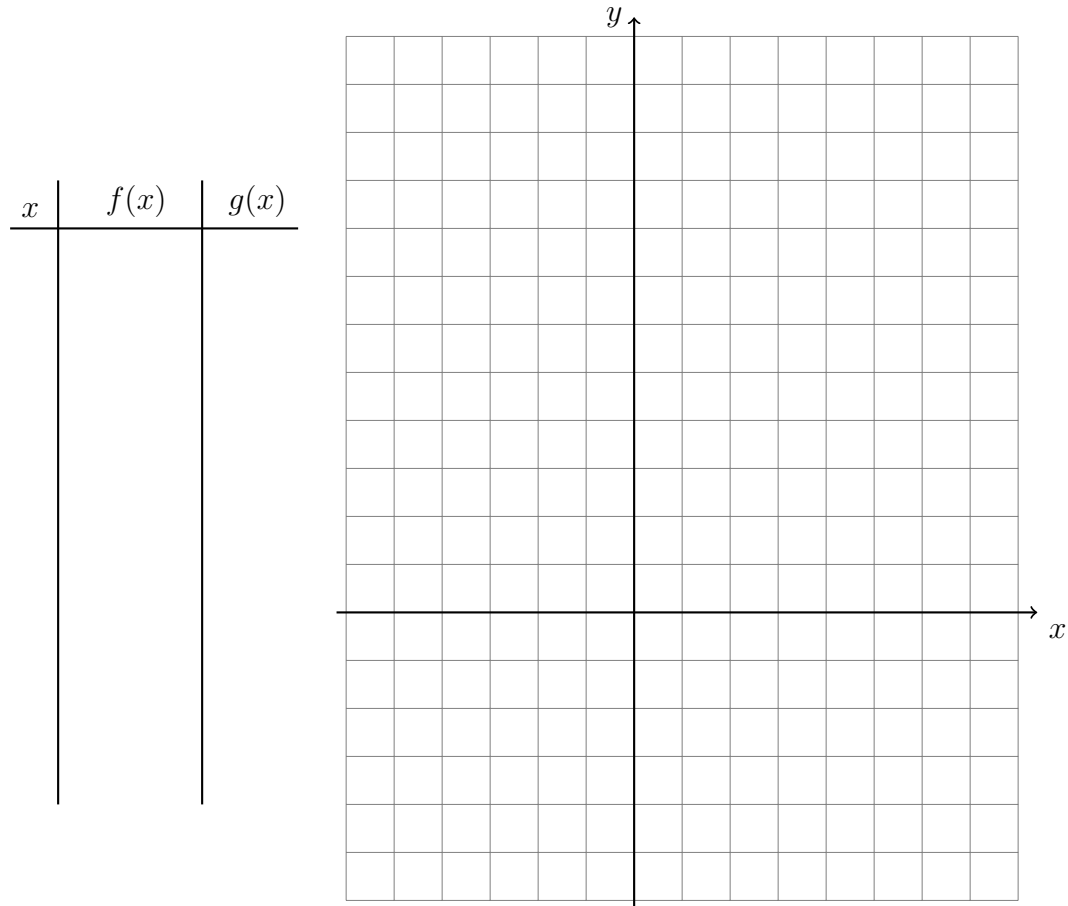


- Mark the vertex of another right triangle in standard position, $D(5,12)$.
- Mark the point E on the x -axis such that $\overline{AE} \perp \overline{DE}$.
- Measure and mark the dimensions of $\triangle ADE$ on the graph.

2. Complete the t-chart for $x = -3, -2, -1, 0, 1, 2, 3$, then graph and label the function on the grid below, labeling the vertex on the graph as an ordered pair.

Use pencil for graphs. Draw parabolas as smooth curves.

$$f(x) = x^2$$



- (a) The parabola is translated two units up, $f \rightarrow g$.

Draw the parabola $g(x)$ on the graph, marking and labeling its vertex.

- (b) Complete the t-chart values for $g(x)$.

- (c) What is the equation of $g(x)$?