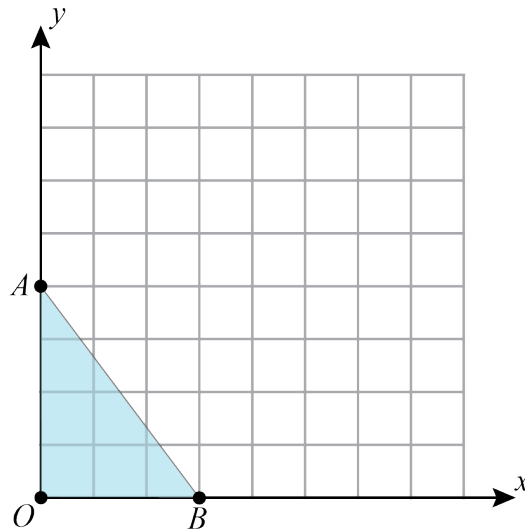# Problem of the Week
Problem B
Triangular Fun

Work through the parts that follow using the following coordinate plane, where grid lines are spaced 1 unit apart.

(a) Label the coordinates of the points A, O, and B.

(b) Plot point C on the y-axis so that OC is twice the length of OA. Then plot point D on the x-axis so that OD is twice the length of OB. Label the coordinates of points C and D.

(c) Show that the area of $\triangle COD$ is four times the area of $\triangle AOB$. To show this, you may use your diagram or an area formula.

EXTENSION: In general, if you double the lengths of the two perpendicular sides of any right-angled triangle, will the area of the new triangle be four times the area of the original triangle? Explain.

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THEME GEOMETRY & MEASUREMENT