Dilations and Scale Factors - Step-by-Step Lesson

Graph the image of rectangle ABCD after dilation with a scale factor of 4, centered at the origin.

Explanation:

This dilation is centered at the origin, so you can find the image by multiplying the x- and y-coordinates by the scale factor.

Multiply the coordinates of point D(0, -1) by 4.

The image is D'(0, -4).
Now multiply the coordinates of point $C(1, -1)$ by 4. The image is $C'(4, -4)$.

Now multiply the coordinates of points $A(0, 1)$ and $B(1, 1)$ by 4. The images are $A'(0, 4)$ and $B'(4, 4)$.
The dilated points form a rectangle similar to ABCD.