

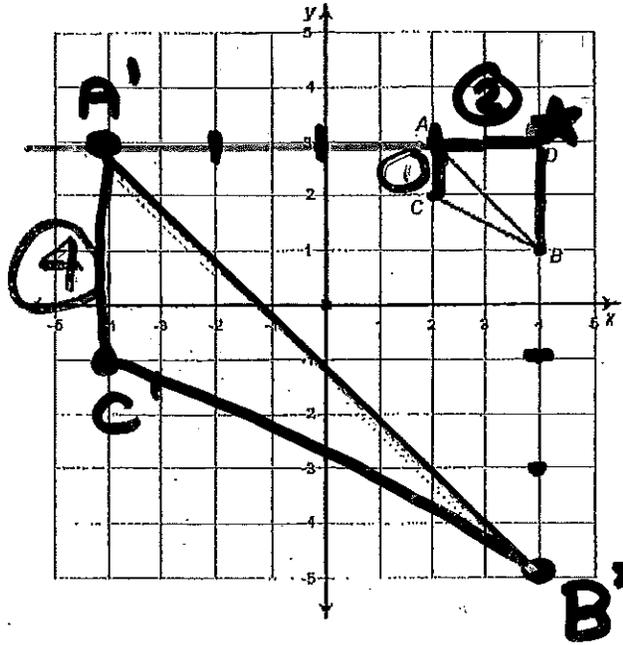
larger! (SF = 4)

22. Dilate the triangle ABC by a scale factor of 4 from the point D and list the coordinates of the vertex A', B' and C'

$$\overline{AD} = 2 \rightarrow \overline{A'D} = 2 \cdot 4 = 8$$

$$\overline{AC} = 1 \rightarrow \overline{A'C'} = 1 \cdot 4 = 4$$

A' ()
B' ()
C' ()



Create a list of all of the basic coordinate transformation rules:

TRANSLATION $(x, y) \rightarrow (x+h, y+k)$
pre-image image

Translate horizontally by h, vertically by k

[e.g. Translate (1, 2) left 3 & up 4,
 $\rightarrow (1-3, 2+4) = (-2, 6)$]
image

Reflect over Y-axis

$$(x, y) \rightarrow (-x, y)$$

PRE. IMAGE

Reflect over x-axis

$$(x, y) \rightarrow (x, -y)$$

PRE. IMAGE

Reflect over line y = x

$$(x, y) \rightarrow (y, x)$$

PRE. IMAGE

Rotate 90° about origin

$$(x, y) \rightarrow (-y, x)$$

PRE. IMAGE

Rotate 180° about origin

$$(x, y) \rightarrow (-x, -y)$$

PRE. IMAGE

Rotate 270° about origin

$$(x, y) \rightarrow (y, -x)$$

PRE. IMAGE

Dilation (of scale factor of M from origin)

$$(x, y) \rightarrow (M \cdot x, M \cdot y)$$

Pre-image image