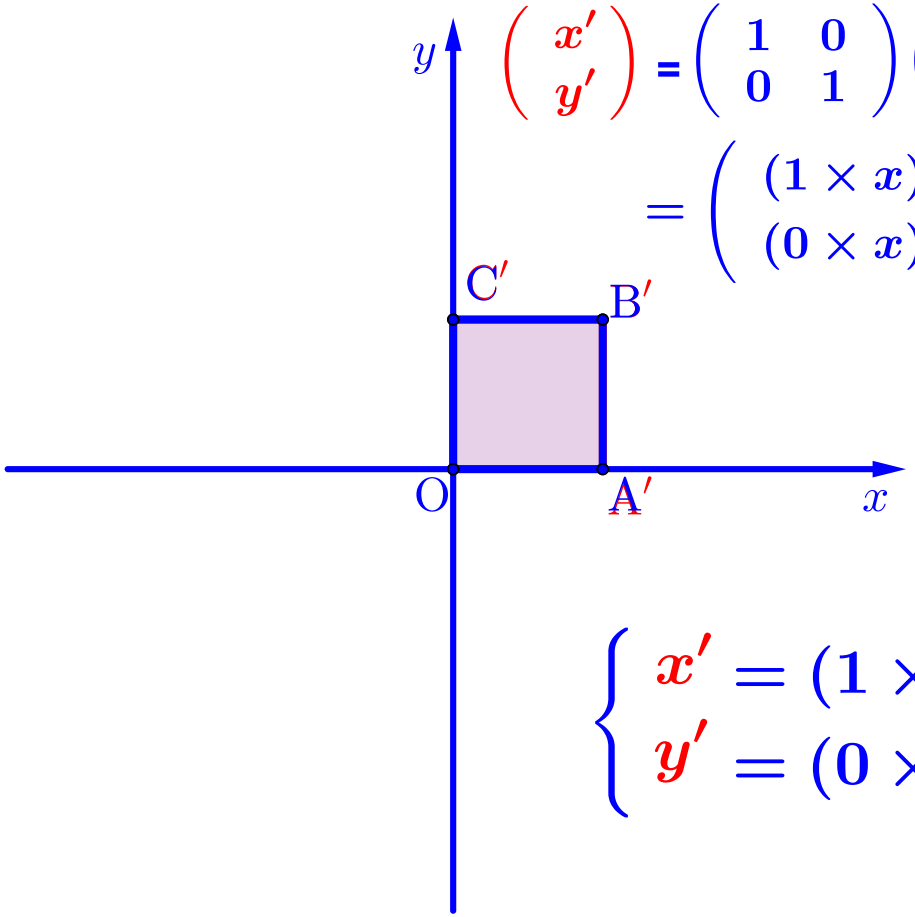
일차변환과 영역 a_{12}
(Linear Transformation and Domain a_{12})

Linear Transformation and Domain a_{12}

Start End

Linear Transformation and Domain a_{12}

Start End



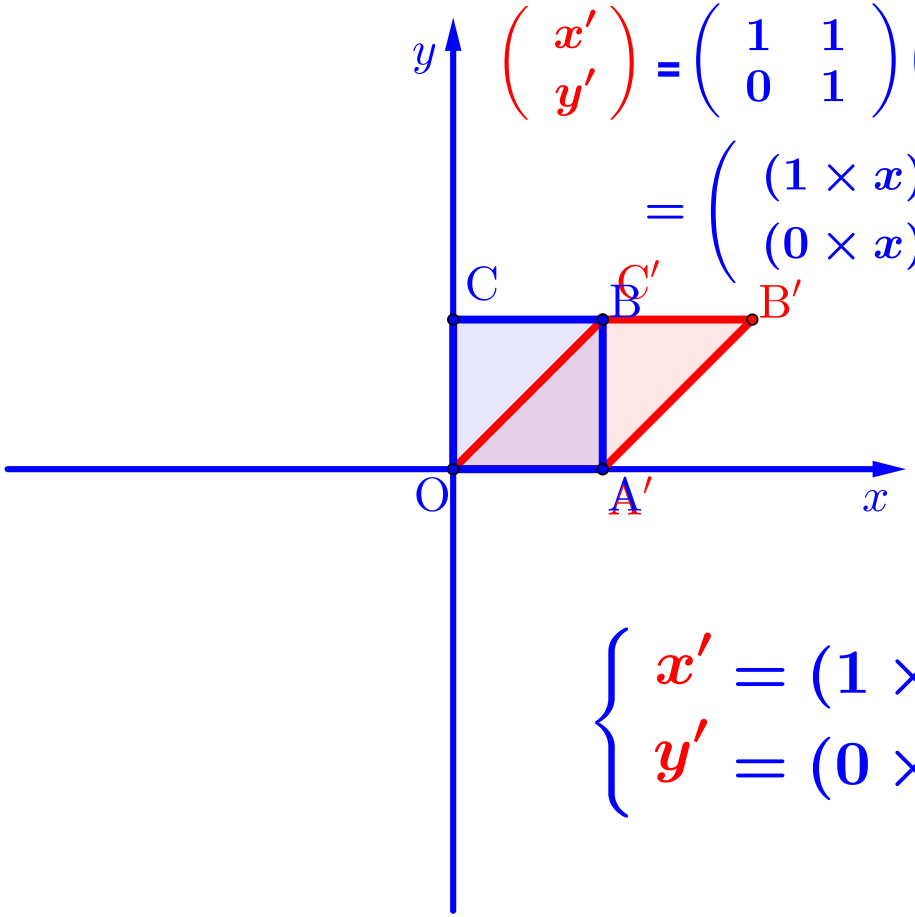
$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (0 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

$$\begin{cases} x' = (1 \times x) + (0 \times y) \\ y' = (0 \times x) + (1 \times y) \end{cases}$$

Linear Transformation and Domain a_{12}

Start End



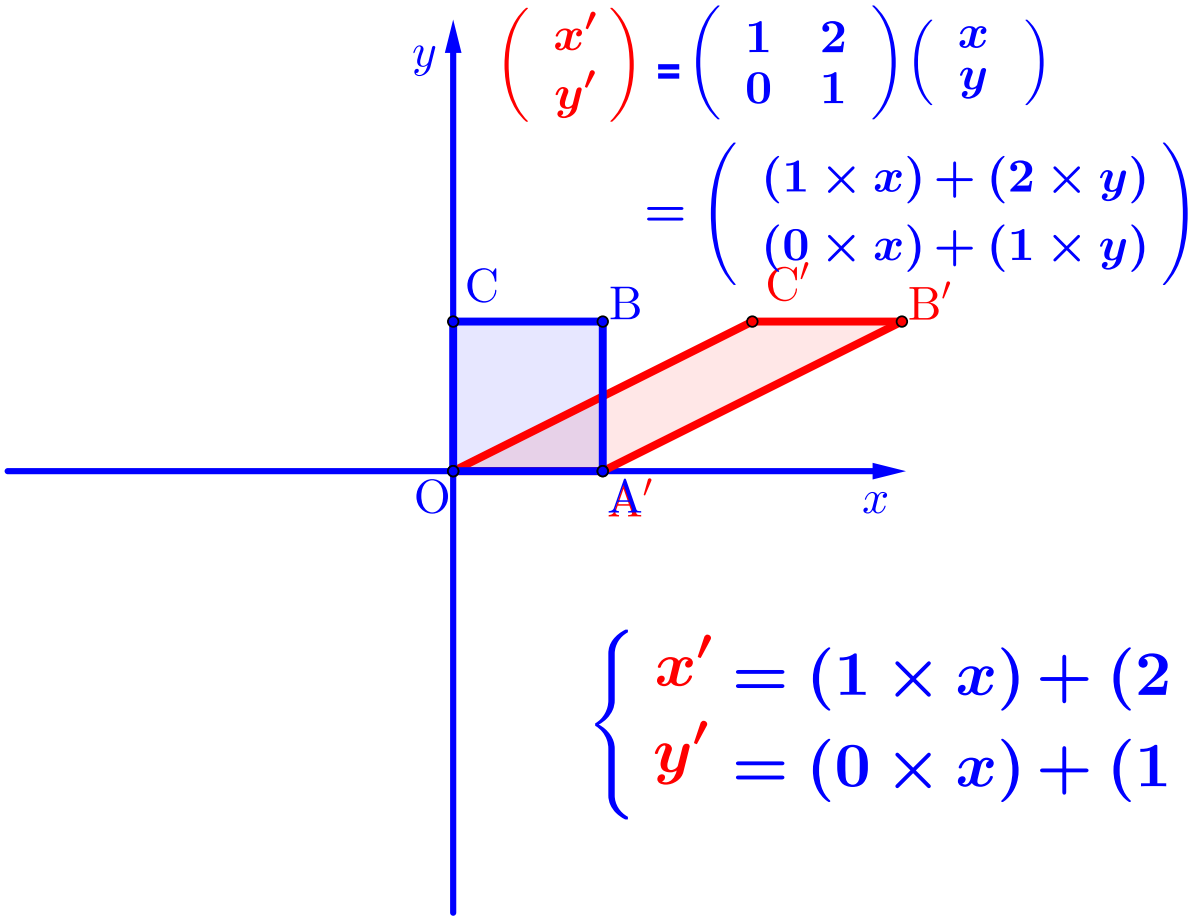
$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (1 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

$$\begin{cases} x' = (1 \times x) + (1 \times y) \\ y' = (0 \times x) + (1 \times y) \end{cases}$$

Linear Transformation and Domain a_{12}

Start End



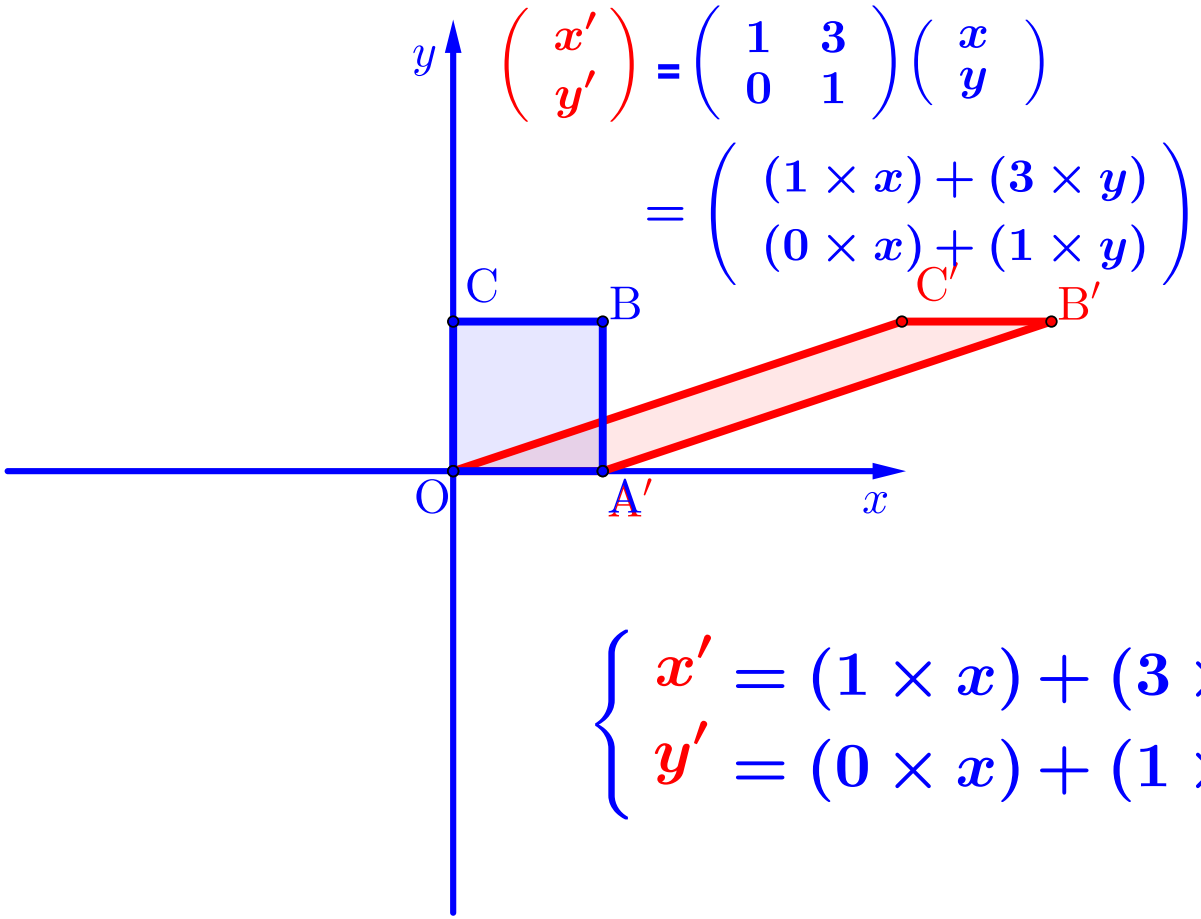
$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (2 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

$$\begin{cases} x' = (1 \times x) + (2 \times y) \\ y' = (0 \times x) + (1 \times y) \end{cases}$$

Linear Transformation and Domain a_{12}

Start End



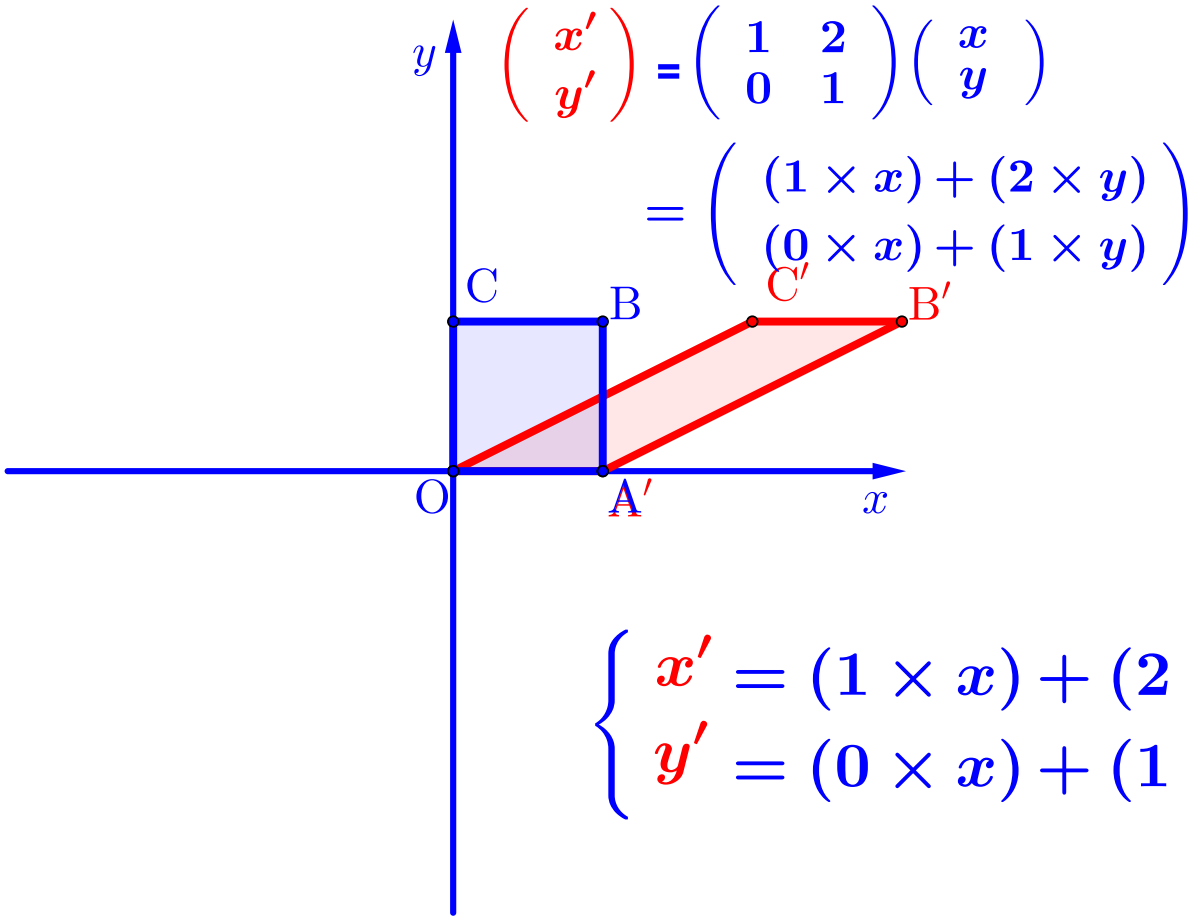
$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & 3 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (3 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

$$\begin{cases} x' = (1 \times x) + (3 \times y) \\ y' = (0 \times x) + (1 \times y) \end{cases}$$

Linear Transformation and Domain a_{12}

Start End



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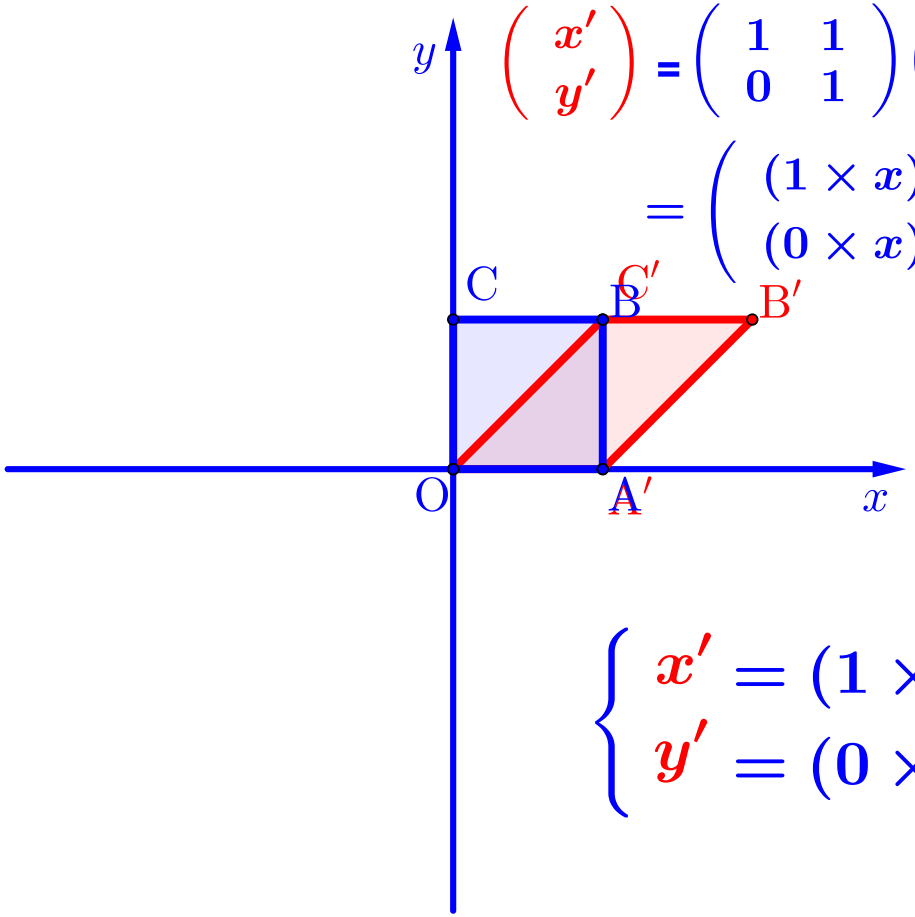

$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

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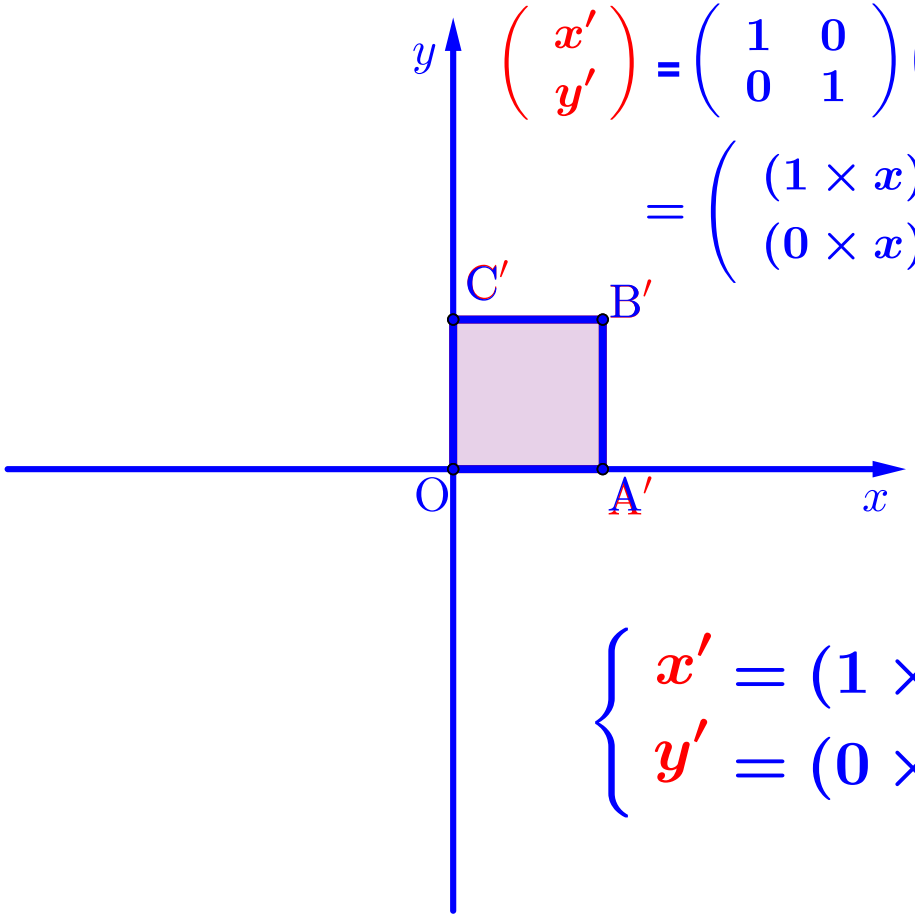

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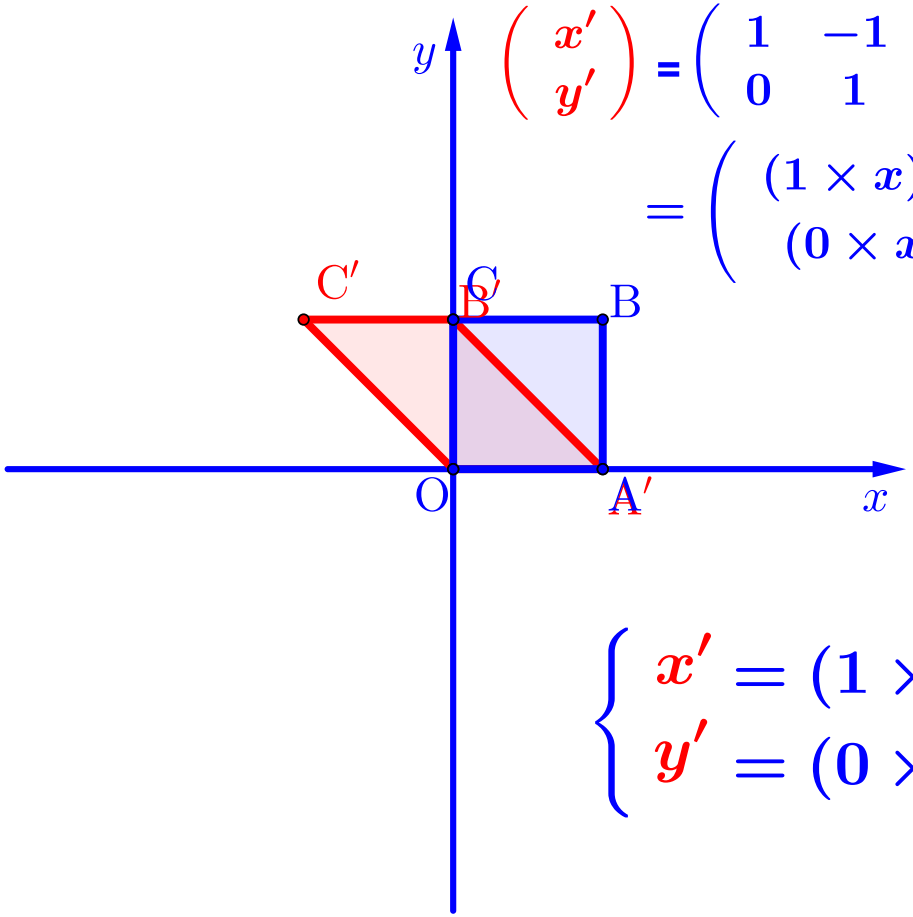

$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & -1 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (-1 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

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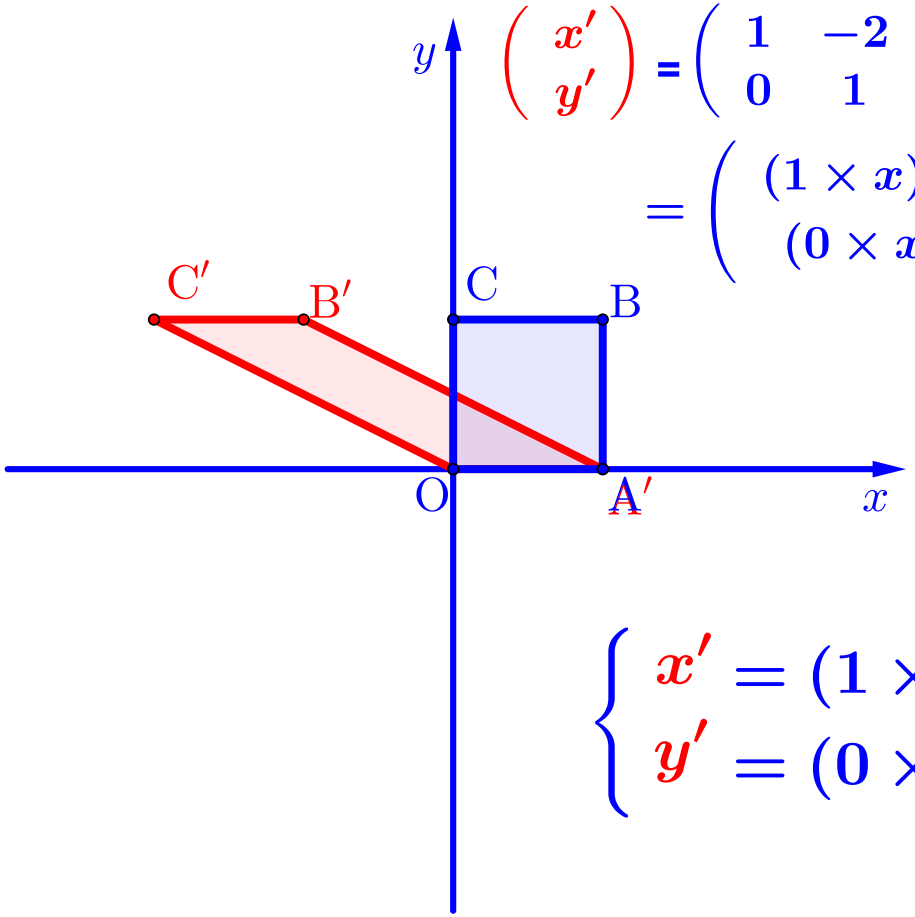
Start End



$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & -2 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (-2 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

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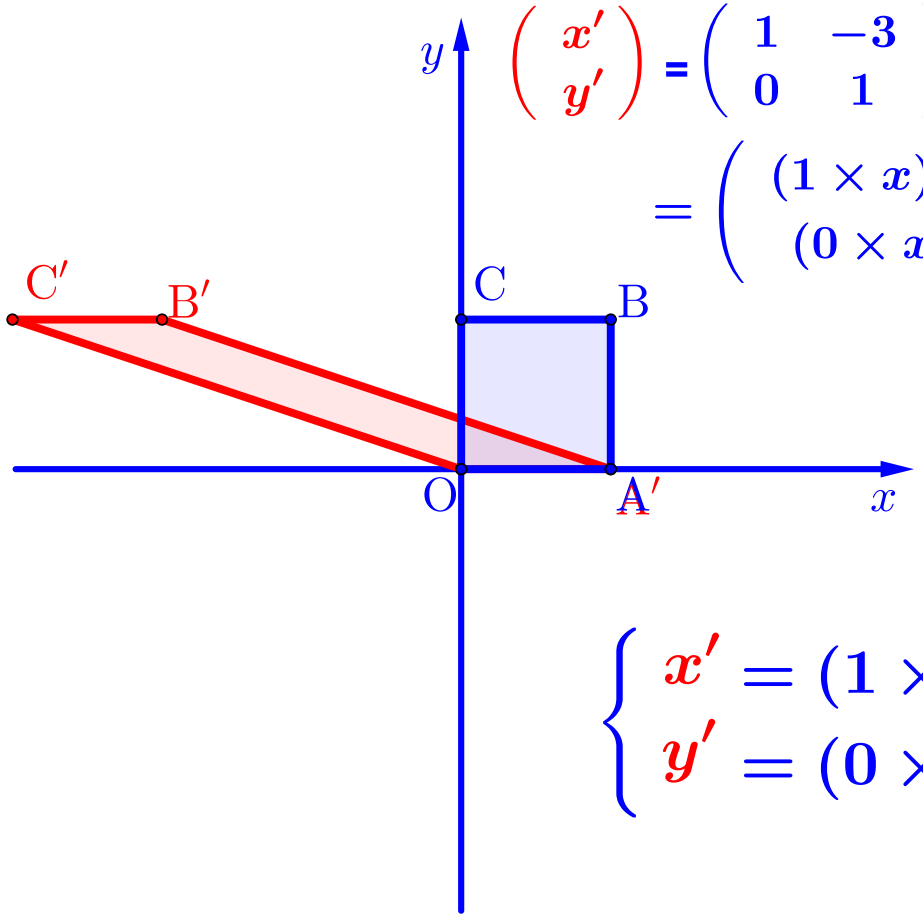

$$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & -3 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$$

$$= \begin{pmatrix} (1 \times x) + (-3 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

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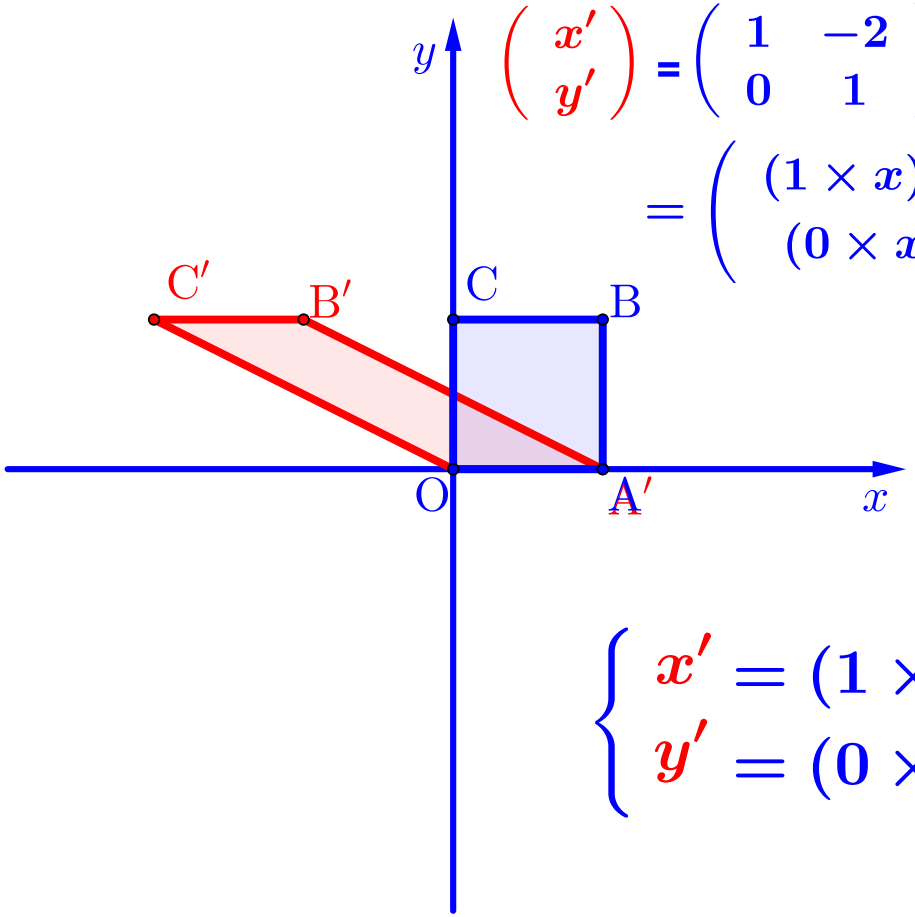
Linear Transformation and Domain a_{12}

Start End



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$$= \begin{pmatrix} (1 \times x) + (-2 \times y) \\ (0 \times x) + (1 \times y) \end{pmatrix}$$

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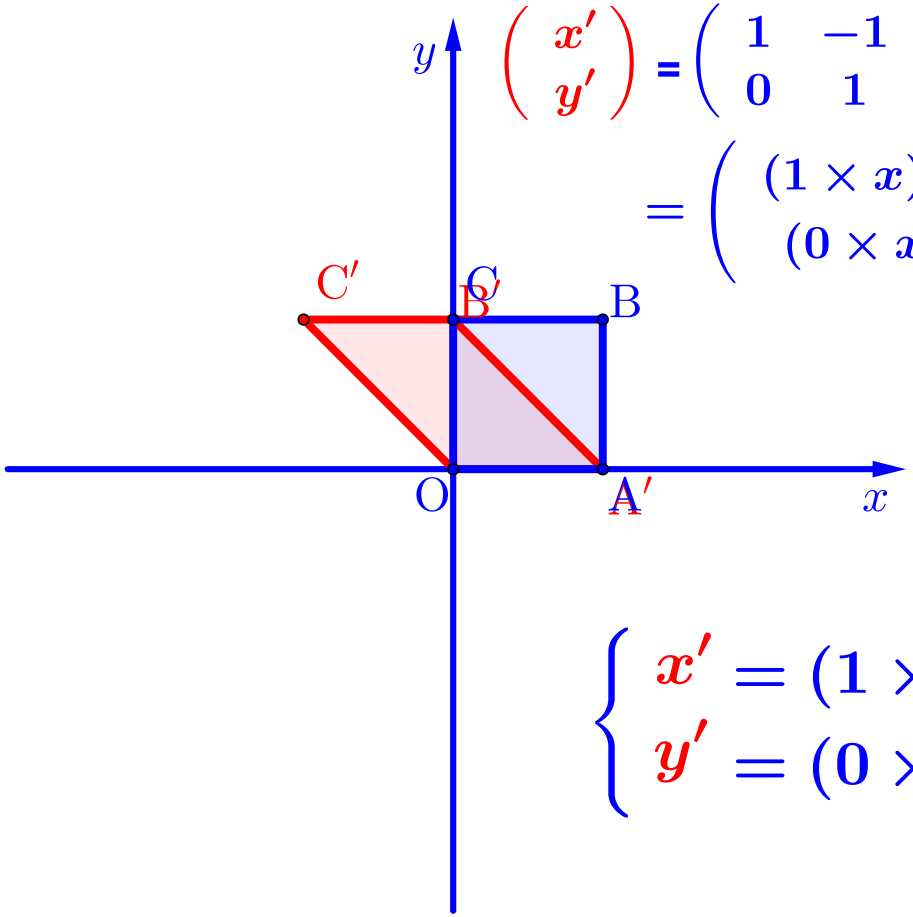

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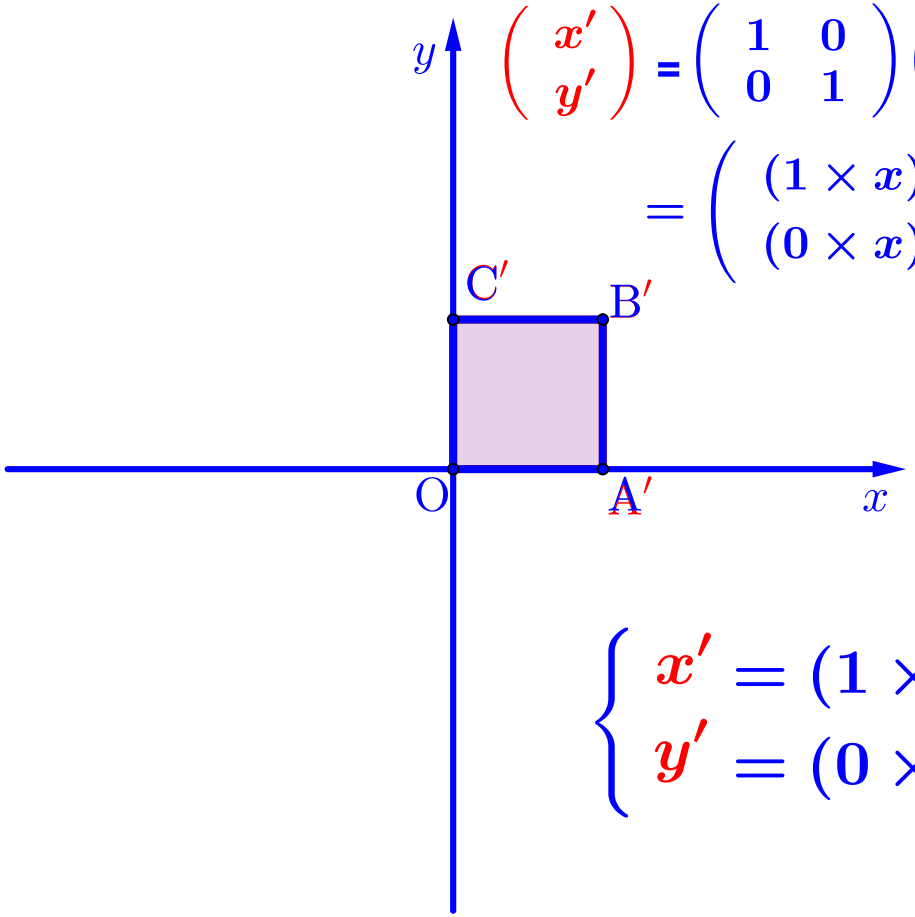

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Github:
https://min7014.github.io/math20230409001.html

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and you can see a picture moving.