Fill in the Blanks — Enlargements and Stretches

Triangle ABC has coordinates $A(1,0)$ $B(5,0)$ $C(4,6)$ and area 12 square units

Matrix	Description of Transformation	Area Scale Factor	A′	B′	C′	Area of A′B′C′
$\begin{pmatrix}3 & 0\\0 & 1\end{pmatrix}$	Stretch parallel to the x-axis with scale factor 3	3	$(3,0)$	$(15,0)$	$(12,6)$	36
$\begin{pmatrix}1 & 0\\0 & 5\end{pmatrix}$	Stretch parallel to the y-axis with scale factor 5	5	$(1,0)$	$(5,0)$	$(4,30)$	60
$\begin{pmatrix}2 & 0\\0 & 2\end{pmatrix}$	Enlargement about $(0,0)$ with scale factor 2	4	$(2,0)$	$(10,0)$	$(8,12)$	48
$\begin{pmatrix}4 & 0\\0 & 2\end{pmatrix}$	Stretch parallel to the x-axis with scale factor 4 and parallel to the y-axis with scale factor 2	8	$(4,0)$	$(20,0)$	$(16,12)$	96
$\begin{pmatrix}-3 & 0\\0 & -3\end{pmatrix}$	Enlargement about $(0,0)$ with scale factor -3	9	$(-3,0)$	$(-15,0)$	$(-12,-18)$	108
$\begin{pmatrix}1 & 0\\0 & -0.5\end{pmatrix}$	Stretch parallel to the y-axis with scale factor -0.5	0.5	$(1,0)$	$(5,0)$	$(4,-3)$	6
$\begin{pmatrix}2 & 0\\0 & -3\end{pmatrix}$	Stretch parallel to the x-axis with scale factor 2 and parallel to the y-axis with scale factor -3	6	$(2,0)$	$(10,0)$	$(8,-18)$	72
$\begin{pmatrix}-1 & 0\\0 & 2.5\end{pmatrix}$	Stretch parallel to the x-axis with scale factor-1 and parallel to the y-axis with scale factor 2.5	2.5	$(-1,0)$	$(-5,0)$	$(-4,15)$	30