triangle KLM has vertices K(1, –4), L(–3, 3), and M(–5, –1). is translated so that K’ is located at point (–3, 2). State the coordinates of L’ and M’, where triangle K'L'M' is the translation of triangle KLM.

Solution

For all points: $x' = x + k,\ y' = y + l; then\ k = x' - x, l = y' - y$

Let’s take a look at points K and K’:

$x' = -3, x = 1, k = -3 - 1 = -4;$

$y' = 2, y = -4\ , l = 2 + 4 = 6.$

Then for point L’: $x' = -3 - 4 = -7, y' = 3 + 6 = 9.$ L’(-7,9)

Then for point M’: $x' = -5 - 4 = -9, y' = -1 + 6 = 5.$ M’(-9,5)