Урок 3, задание 33

2) $A_1(x_1, y_1) \to A_1'(x_1'; y_1')$

$A_2(x_2, y_2) \to A_2(x_2'; y_2')$

$$|A_1A_2|^2 = [x_2' - x_1']^2 + [y_2' - y_1']^2 = [a_{11}(x_2 - x_1) +$$

$$+ a_{12}(y_2 - y_1)]^2 + [a_{21}(x_2 - x_1) + a_{22}(y_2 - y_1)]^2 =$$

$$= (a_{11}^2 + a_{21}^2)(x_2 - x_1)^2 + (a_{12}^2 + a_{22}^2)(y_2 - y_1)^2 +$$

$$+ 2(a_{11}a_{12} + a_{21} \cdot a_{22})(x_2 - x_1)(y_2 - y_1) =$$

$$= (x_2 - x_1)^2 + (y_2 - y_1)^2 = |A_1A_2|^2$$

$$\Rightarrow |A_1A_2| = |A_1'A_2'|$$