

MR700900 (84i:53005) [53A04](#) [53A30](#)**Matsyuk, R. Ya.****Infinitesimal symmetries of helical lines in a flat space. (Russian)***Mat. Metody i Fiz.-Mekh. Polya* No. 15 (1982), 35–39.

The curves $x = x(\tau)$ of (pseudo-)Euclidean space E of n dimensions are studied. By using the derivatives of the coordinates of x , elements of the space $T^{(n)}E$ are defined. In $T^{(n)}E$ the functions corresponding to the curvatures of x are found. These functions do not depend on the choice of parameter for x . By using $T^{(n)}E$, the functions k_1, \dots, k_{n-1} of the subset V of the space $C^{(n)}E$ of contact elements are found. Helices are the integral curves of the equations $dk_l = 0$ ($l = 1, \dots, n-1$). The infinitesimal symmetries of helices are studied. If $n > 2$, then the generator of the infinitesimal symmetries of the helices is decomposed into the generator of the pseudo-Euclidean group of E and the generator of the group of homogeneous expansions. If $n = 2$, then the infinitesimal symmetries of helices are the generators of the conformal group of E . Josef Vala

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