Geometric heritage of al-Farabi in education

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Abstract: On the base of studying geometrical treatise of al-Farabi and A.Kubesov's works devoted to their research the expediency of introduction geometric heritage of al-Farabi to modern mathematics education due to its uniqueness, which is reflected in use of algorithmic approach in solving geometrical problems and its application-oriented direction is proved in the article.

Keywords: mathematical heritage, geometric construction, construction with help of compass and ruler, algorithm, algorithmic approach, application-oriented direction, mathematics education.

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References

- Bidaibekov Y.Y., Bostanov B.G., & Kamalova G.B. (2013). The mathematical heritage of Al-Farabi by A.Kubesov in modern conditions of education. In IX International ISAAC Congress, Poland, Krakow, August 5-9, 2013. pp.33-34
- [2] Carry J. Tee (University of Aucland), Kubesov A.K. The Mathematical Heritage of al-Farabi (in Russian). Journal for the history of Arabic science. - No.1 (1978), pp. 150-153.
- [3] Rescher N. (1962). Al-Farabi: An Annotated Bibliography. Pittsburgh: University of Pittsburgh Press.
- [4] Kubesov A. (1974). Mathematical heritage of al-Farabi. Alma-Ata: Nauka (in Russian).
- [5] Bidaibekov Y.Y., Bostanov B.G., Kamalova G.B., & Dzhanaberdieva S.A. (2015). Mathematical heritage of al-Farabi in modern education. Vestnik of Kazakh national university named after al-Farabi. Series of politology, philosophy, culturology, 2(51), 50-57 (in Kazakh).
- [6] Al-Farabi (1972). Mathematical treatises. Alma-Ata: Nauka (in Russian).
- [7] Courant R., & Robbins H. (2001). What is Mathematics? (An elementary approach to ideas and methods). Moscow: MCFCME (in Russian).
- [8] Government program "Madeni mura" Cultural heritage of Kazakhstan:http://www.madenimura.kz/ru/government-program-madenimura/programsmadenimura/.