

APPLYING THE OPTIMAL METHOD OF DETERMINING THE INTERSECTION OF TWO PLANES

Kayumov X. A.,

Tashkent State University of Transport

Kamilzhonov N.

Tashkent State University of Transport

Annotation. This article highlights the role of Engineering Computer Graphics in the development of creativity in students. The article covers the importance, purpose, content, advantages in teaching the development of creativity for students of higher educational institutions through the science of Engineering Computer Graphics.

Keywords: intersection planes, intersection line of planes, intersection point of a straight line with a plane.

Nowadays, modern information technologies are entering into all areas and are taking their toll on the improvement of these areas. In higher educational institutions, summed up in technical higher educational institutions, we can see that new methods are also being introduced when teaching subjects of the subject "Drawing geometry". This does not go without contributing to the improvement of Science, the interesting organization of the course process, the increase in students' knowledge of science. After all, "the goal is to get the highest possible result from the money and effort invested in the application of innovations in the educational system or educational activities. In particular, in the following drawings, we can see that the intersection of two planes, and precisely the intersection of a plane with a straight line in solving the problem in this way, is based on the method of topping the mumin.

Where two planes P and Q intersect in a straight line m, it suffices to define two common points belonging to either plane to make this line (Figure 1).

In Figure 2-A, B, the intersecting planes P and Q are given. As can be seen from the image, the points E and F common to these planes will be the intersection points of the one-name traces of the planes: $E = QH \cap PH$ and $F = QV \cap PV$.

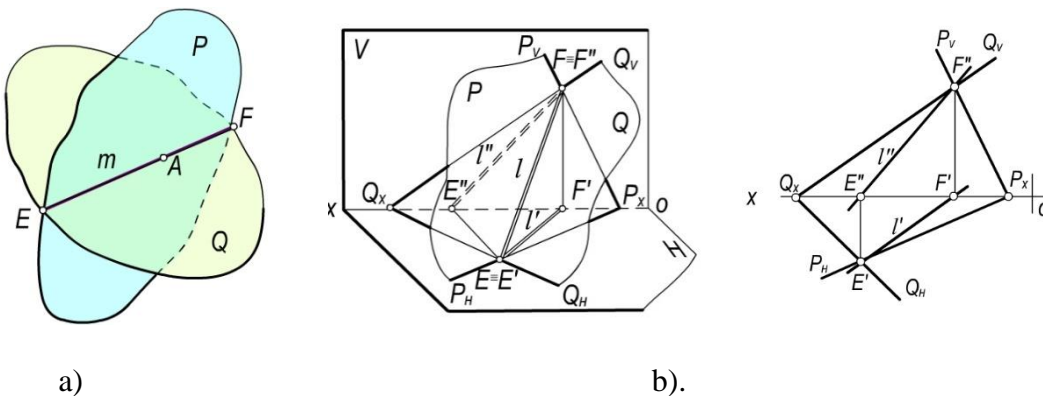


Figure 1-Figure 2

When these points are held together, the L intersection line of the Q and P planes is formed:

$$l = Q \cap P.$$

For example, the horizontal traces of T (TH, TV) and P (PH, PV) planes (Figure 3) intersect in Tn and PN second octant.

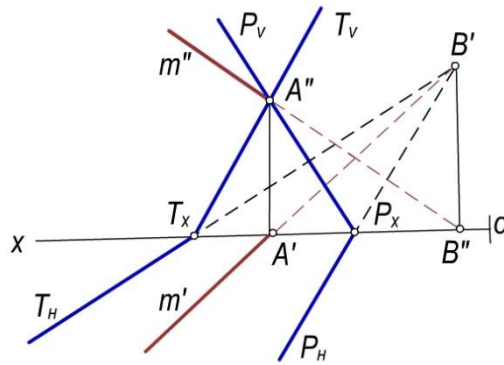


Figure 3

In Figure 4-A,B, the intersection line h of the horizontal plane H1 with the T plane in the general situation is horizontal.

One of the projections of their intersection line is in the trace of the projective plane (Figure 5).

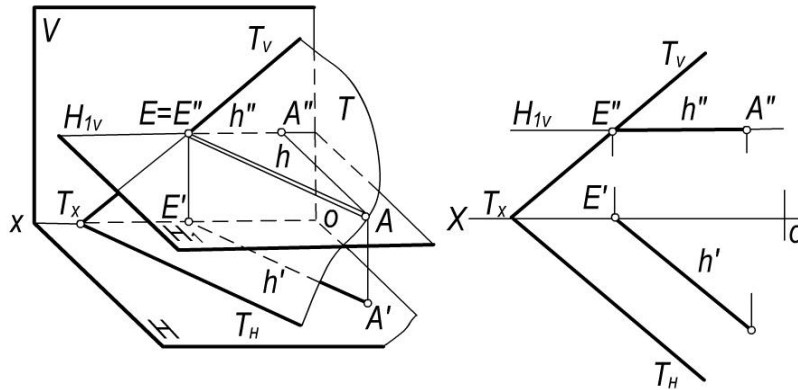


Figure 4

When one-name trace of intersecting planes does not intersect at the boundary of the drawing, their intersection line can be determined by means of auxiliary planes (Figure 6).

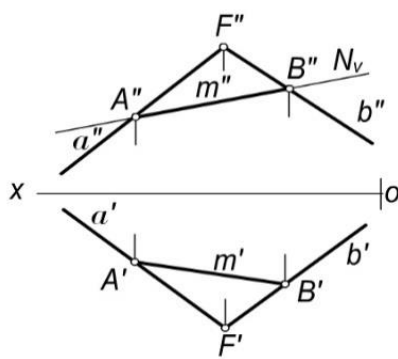


Figure 5

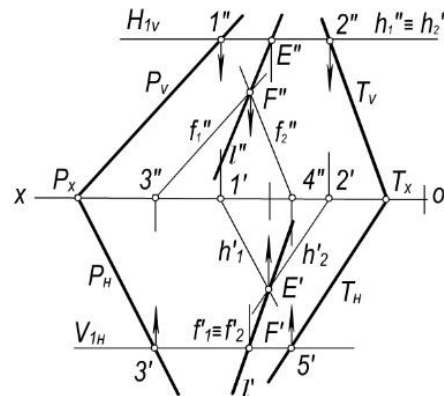


Figure 6

The horizontal H1 and H2 planes were passed to make the intersection line of the Q and P planes given by the lines A || B and s Ç d in the general situation in Figure 7 A, B.

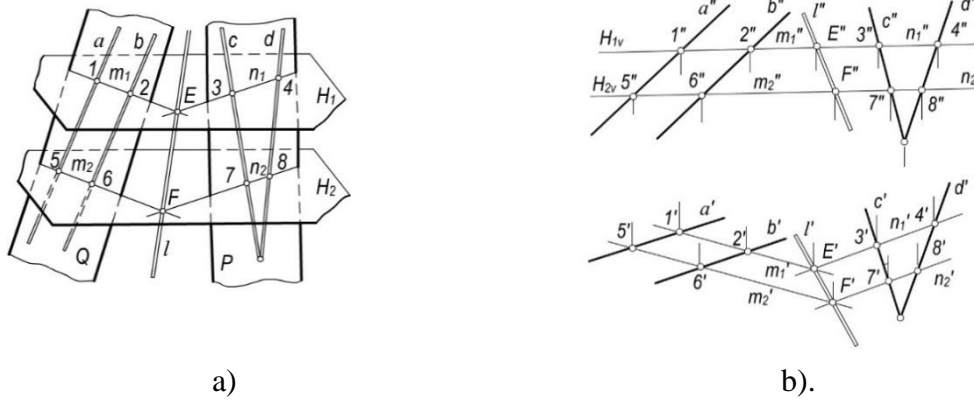


Figure 7

Intersecting points E and F, common to both P and Q planes, yields a line of intersection of the planes.

This straight line intersects with the plane if the straight line is parallel to or does not belong to the plane.

A point is formed by the intersection of a straight line with a plane.

It uses the following making algorithms to determine the Point (Figure 8

- From a given straight line a auxiliary s the plane is passed: a Iris S
- * The intersection L line of the planes R and S is made: $S \cap R = l$
- the point at which a straight line intersects l IS $K = A \cap l$.

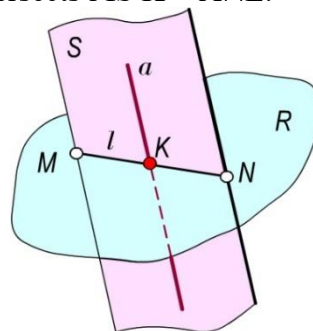
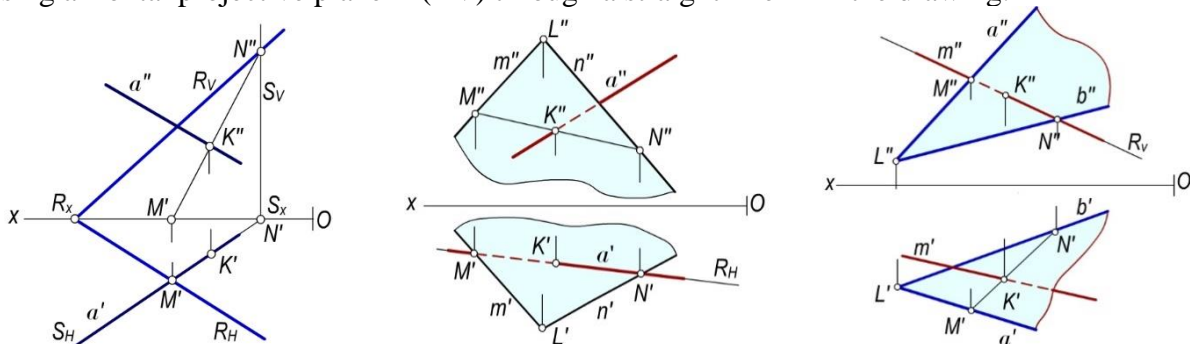


Figure 8

In the drawing, we define the K' and K'' projections of the intersection point K of a(a', a'') straight line with the plane R (RH, RV) according to the making algorithms presented above (figure 9). projections of the K intersection point of line A with the(mÇn) plane were determined in the drawing 10 by passing a horizontal projective plane R(RH) through a straight line in Figure 11 by passing a frontal projective plane R (RV) through a straight line m in the drawing.



In conclusion, it can be noted that at the same time when educational technologies are being introduced in all areas, the introduction of new methods and tools, the application of interactive technologies, even in the teaching of the subject “Drawing geometry and engineering graphics”, contributes to an increase in the effectiveness of the lesson so that students' knowledge is solid. In the activities of each educator, the role of educational technologies is great. Problematic practical assignments, on the other hand, serve to increase students' independent thinking skills.

Literatures:

1. Толипов У., Усмонбоева М. Педагогик технологияларнинг тадбикий асослари - Т.: 2006.
2. Odilbekovich, S. K., Bekmuratovich, E. A., & Islamovna, M. F. (2023). Requirements for a Railway Operation Specialist on Traffic Safety Issues. *Pioneer: Journal of Advanced Research and Scientific Progress*, 2(3), 98-101.
3. Халимова, Ш. Р., Мамурова Ф. Я. (2023). Изометрическое и диметрическое представление окружностей и прямоугольников. *Miasto Przyszłości*, 33, 128-134.
4. Odilbekovich, S. K. (2023). Optimization of the Ballast Layer on Loaded Freight Cars and High-Speed Lines. *Nexus: Journal of Advances Studies of Engineering Science*, 2(3), 92-98.
5. Mamurova, F., & Yuldashev, J. (2020). METHODS OF FORMING STUDENTS'INTELLECTUAL CAPACITY. *Экономика и социум*, (4), 66-68.
6. Islomovna, M. F., Islom, M., & Absolomovich, K. X. (2023). Projections of a Straight Line, the Actual Size of the Segment and the Angles of its Inclination to the Planes of Projections. *Miasto Przyszłości*, 31, 140-143.
7. Mamurova, F. I. (2022, December). IMPROVING THE PROFESSIONAL COMPETENCE OF FUTURE ENGINEERS AND BUILDERS. In *INTERNATIONAL SCIENTIFIC CONFERENCE" INNOVATIVE TRENDS IN SCIENCE, PRACTICE AND EDUCATION"* (Vol. 1, No. 4, pp. 97-101).
8. Islomovna, M. F. (2022). Success in Mastering the Subjects of Future Professional Competence. *EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION*, 2(5), 224-226.
9. Shaumarov, S., Kandakhorov, S., & Mamurova, F. (2022, June). Optimization of the effect of absolute humidity on the thermal properties of non-autoclaved aerated concrete based on industrial waste. In *AIP Conference Proceedings* (Vol. 2432, No. 1, p. 030086). AIP Publishing LLC.
10. Pirnazarov, G. F., Mamurova, F. I., & Mamurova, D. I. (2022). Calculation of Flat Ram by the Method of Displacement. *EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION*, 2(4), 35-39.
11. Mamurova, F. I. (2021). The Concept of Education in the Training of Future Engineers. *International Journal on Orange Technologies*, 3(3), 140-142.
12. Islomovna, M. F. (2023). Methods of Fastening the Elements of the Node. *EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION*, 3(3), 40-44.
13. Islomovna, M. F. (2023). Engineering Computer Graphics Drawing Up and Reading Plot Drawings. *New Scientific Trends and Challenges*, 120-122.
14. Khodjayeva, N., & Sodikov, S. (2023). Methods and Advantages of Using Cloud Technologies in Practical Lessons. *Pioneer: Journal of Advanced Research and Scientific Progress*, 2(3), 77-82.