MASTERING TASKS OF ENGINEERING GRAPHICS THROUGH AUTOCAD SOFTWARE

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Abstract:
If we recognize the changes in the field of education today, one of our first problems is to expand students' worldview and increase their interest in science. At the same time, this article describes the method of developing students' attitude to science.

Keywords: command, Editing sequence, object, toolbar, mastery indicator, interest.

Introduction

Redaktirovanie - Editing toolbar Editing means changing. The editing toolbar mainly works on created objects. Let's take a look at the editing toolbar icons

Steret - Delete command

Kopirovat - Copy command

Mirror - Mirror command

Podobie – Command of simile

Array... – Array... multiplication command

Perenesti - Eviction order

Povernut – Twist command

Scale – Scale command

Rastyanut - Stretch command

Obrezat - Clipping command

Udlinit – Extension command

Razorvat v tochke – An order to disconnect at one point

Razorwat – Disconnect command

Soedinit – Connection command

Faska – Faska order

Sopryazhenie - Order of connection

Raschlenit - Order to divide into parts

This command button means to delete the selected object.
Editing sequence:

Method I:

The object is selected using the mouse.
Steret – Delete command icon is clicked.
Method II:

Steret – Delete command icon is clicked.
The mouse pointer switches to the object selection mode and gives the information **"Vyberite ob'ekty:"** - Select objects:.
The object is selected using the mouse.
The right mouse button is pressed or the **"Enter"** key is pressed on the keyboard.
Method III:
1. The object is selected using the mouse.
2. Press the **"Delete"** button on the keyboard.
Kopirovat - Copy command This command button allows you to copy and duplicate objects.
Editing sequence: The object is selected using the mouse.
Copy – The Copy command icon is selected.
The information **"Bazovaya tochka ili ↓"** - Base point or ↓ appears on the screen. If a point of the object is selected with the mouse, this point is taken as the basis for moving the copied object. This method involves copying the copied object in multiple copies based on a specific point. If **"Bazovaya tochka ili ↓"** - Base point or ↓ information is displayed, if the ↓ indicator on the keyboard is pressed and the additional information menu is called, then there is one item - **"Peremeshchenie"** - Move. This clause implies copying the object (objects) in a certain direction and at a certain distance. This item is selected using the "Enter" key or the mouse pointer. The bearing is entered based on the angle by moving the mouse pointer, and the distance is entered based on the value from the keyboard and confirmed with the **"Enter"** key.
Mirror - Mirror command

This editing command involves mirroring the object.
It is worth noting that in reverse reflection imaging, it is necessary to indicate a certain axis, and the object (objects) are reflected in relation to this axis. Two points of the reflecting axis are shown, and all the points of the object (objects) are located at the same distance from this axis as they are in the opposite direction.
Editing sequence:
1. The object is selected using the mouse.
2. The Mirror – Mirror command icon is clicked.
The information **"Pervaya tochka osi otrazheniya:"** - the first point of the reflecting axis: is displayed on the screen.
3. The first point of the reflection axis is selected using the mouse pointer.
The information **"Vtoraya tochka osi otrazheniya:"** - The second point of the reflecting white: is displayed on the screen.
4. The second point of the reflecting white is selected using the mouse pointer.

"Udalit iskhodnye ob'ekty?" ↓» N - Delete initial objects? ↓ Y information is output.

5. If it is not necessary to delete the initial objects, press the **"Enter"** key from the keyboard. This confirms the H **- "net"** - no command in the information window. If it is necessary to delete, select the ↓ indicator on the keyboard and an additional information window will be displayed. It has two clauses **"Da"** - Yes**, "Net"** - No. If **"Yes"** is selected, the original object will be deleted and the reflected object will be saved.

Podobie – Command of simile

This command is used to create similar views. It is done by entering the distance between parallel lines through this command. In the comparison command, it is possible to make the views of the same size different. To do this, the object is drawn and the command is loaded, the field between which the distance can be entered and moved is determined and the enter key is pressed.

Array... – Array... multiplication command. In the array command, the item can be multiplied in two ways.

1. **Pryamougal array** - This method multiplies the frontal and horizontal views. The number of items and the distances between them must be entered.

2. **Kurugovoy array** - In this method, it is possible to multiply views along the circle by specifying the degree of rotation and the center.

Perenesti - Eviction order. Moves the drawn views to the desired place. For example: This command is used to place drawn graphic tasks in a format.

Povernut – Twist command. Drawings of any type drawn, a straight line can be turned based on the specified degree.

Scale – Scale command. In some cases, the size of the drawings exceeds the size of the drawn format, or they are given in a very small size compared to the format, so we can reduce or enlarge such drawings based on the scale.

Let's try all the commands in the editing toolbar with the help of examples. All of these commands are fundamental in making changes to the drawn drawing

_ Copy - Copy command.

Using this command, you can make as many copies of the drawings as you need [1,2,3,4]. First we draw the pentagon ABCDE. After that, let's make the point A of the pentagon as the center of the circle and draw a circle. We copy the circle to the other ends of the pentagon. (Chart 3.1). It is done in the following order.

Figure 3.1.

1. Copy command is loaded using LM.

2. As an object to be multiplied, a circle with a square marker is marked using LM and the Enter key is pressed.

3. The center of the circle is defined by LM as a reference point.

4. The object to be multiplied is placed on the ends of the pentagon B, C, D, E in a row using LM and the Enter key is pressed.

Mirror - Mirror command.

Using this command, an object's reflection image is obtained with respect to the axis of symmetry. A straight line section is taken as the axis of symmetry. The axis of symmetry can be obtained in horizontal, vertical and transverse cases.

Example 4.1. Draw a drawing of the detail (1/4 part) given in drawing 4.1. Each cell is 10mm. It is recommended that the student draw this drawing independently.
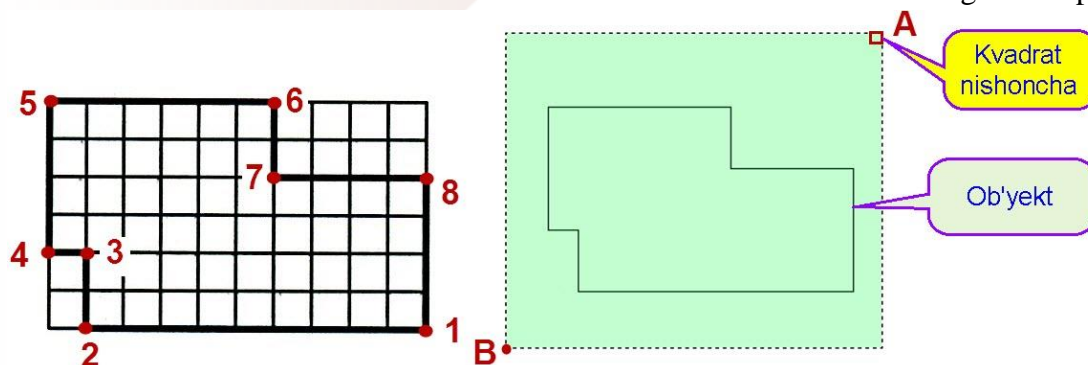

Figure 4.1.   Figure 4.2.

This example is drawn in the following steps. Stage 1.

Turn on the "Polyarnoe otslejivanie" button.

1. _Line – Cut – Cut command is loaded using LM.

2. In the middle of the drawing area, point 1 is determined using LM.

3. Place the cursor horizontally on the left side, then enter 90 numbers on the keyboard and press the Enter key. (Point 2).

4. Place the cursor in the upper vertical position, then enter 20 numbers on the keyboard and press the Enter key. (Point 3).

5. Place the cursor horizontally on the left side, then enter 10 numbers on the keyboard and press the Enter key. (point 4).

6. Place the cursor in the upper vertical position, then enter 40 numbers on the keyboard and press the Enter key. (Point 5).

7. Place the cursor in a horizontal position to the right, then enter 60 numbers on the keyboard and press the Enter key. (Point 6).

8. Place the cursor in a vertical position, then enter 20 numbers on the keyboard and press the Enter key. (Point 7).

9. Place the cursor in a horizontal position to the right, then enter 40 numbers on the keyboard and press Enter. (Point 8).

10 Type the letter Z of the [Zamknut] option on the keyboard and press the Enter key. As a result, we drew drawing 4.1 in the given dimensions.

FOYDALANILGAN ADABIYOTLAR RO'YXATI

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