

Практикум по научному письму

Колчева Юлия Вячеславовна

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РУДН, Москва, Россия

Лабораторная работа 8

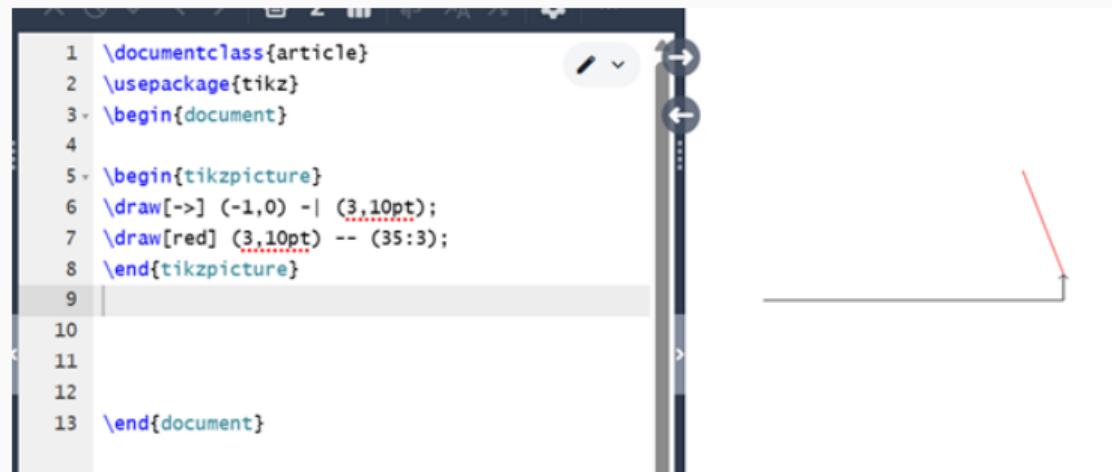
The screenshot shows a LaTeX editor interface. On the left, there is a code editor with the following LaTeX code:

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}
6 \draw (-1,0) -- (3,10pt) -- (35:3);
7 \end{tikzpicture}
8
9
10
11 \end{document}
```

The code editor has a dark theme with syntax highlighting. Lines 6 and 7 are highlighted in red, indicating an error or warning. On the right side of the interface, there is a preview area showing a simple geometric diagram: a horizontal line segment from (-1,0) to (3,10pt), followed by a curved arc from (3,10pt) to (35:3).

Рис. 1: LaTeX

Работа с графиками



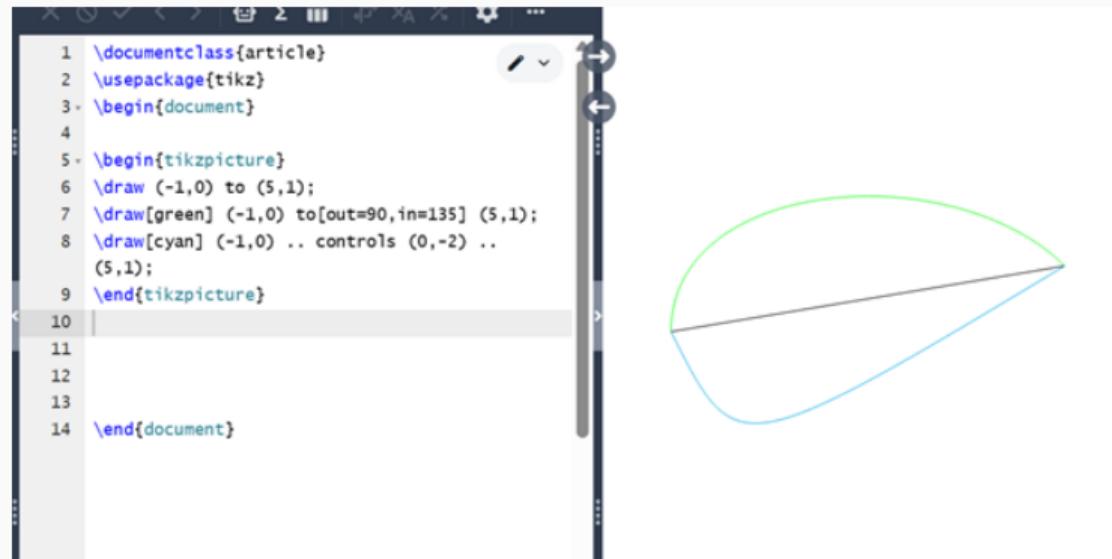
The screenshot shows a LaTeX editor interface. On the left, a code editor displays the following LaTeX code:

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}
6 \draw[->] (-1,0) -- (3,10pt);
7 \draw[red] (3,10pt) -- (35:3);
8 \end{tikzpicture}
9
10
11
12
13 \end{document}
```

On the right, a preview window shows a diagram consisting of a horizontal black line segment and a red line segment originating from its right endpoint at an angle of 35 degrees.

Рис. 2: LaTeX

Работа с графиками



The screenshot shows a LaTeX editor interface. On the left, a code editor displays the following LaTeX code:

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}
6 \draw (-1,0) to (5,1);
7 \draw[green] (-1,0) to[out=90,in=135] (5,1);
8 \draw[cyan] (-1,0) .. controls (0,-2) ..
9 (5,1);
10 \end{tikzpicture}
11
12
13
14 \end{document}
```

On the right, a preview window shows the resulting diagram. It features a green circle centered at (0, 0.5) with radius 1. A gray straight line segment connects (-1, 0) and (5, 1). A cyan curve also connects these points, passing through (0, -2) as specified in the code.

Рис. 3: LaTeX

Работа с графиками

The image shows a LaTeX editor interface. On the left, there is a code editor window containing the following LaTeX code:

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}[scale=3]
6 \draw (0,0) node {hello} -- (1,1) node
7 {world};
8 \end{tikzpicture}
9
10
11
12
13 \end{document}
```

To the right of the code editor is a preview area displaying a simple graph. It consists of two nodes: "hello" at the origin and "world" at the point (1,1). They are connected by a straight line segment.

Рис. 4: LaTeX

Работа с графиками

The screenshot shows a LaTeX editor interface. On the left, there is a code editor with the following LaTeX code:

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}[scale=3]
6 \draw (0,0) node[circle, draw]
7   {$\sum_{i=1}^n n^2$} -- (1,1)
8 node[rectangle, draw]{$\frac{1}{\sqrt{2}}$};
9
10
11 \end{document}
```

On the right, there is a preview area showing a circle containing the mathematical expression $\sum_{i=1}^n n^2$ and a square containing the fraction $\frac{1}{\sqrt{2}}$, with a line connecting them.

Рис. 5: LaTeX

Работа с графиками

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}[scale=2]
6 % Define the nodes
7 \node[circle, draw] at (0,0) (a) {A};
8 \node[rectangle, fill] at (3,0) (b) {};
9 \node at (3,0.4) (blabla) {B};
10 \node[rectangle, rounded corners, draw] at
11 (5,2) (c) {C};
12 % Draw the paths
13 \draw[->, green] (a) -- (b) node[midway,
14 below,black]{2};
15 \draw[<-, blue] (a) to[out=45, in=135] (b);
16 \draw[<-,red] (b)--(c);
17 \draw[yellow,dotted,very thick] (b) |- (c);
18 \draw[<-,cyan] (b) -| (c);
19 \draw[thick,black] (a).. controls (1,5) ..
20 (c) node[midway, above]{$\frac{1}{2}$};
21 \end{tikzpicture}
22
23
24
25 \end{document}
```

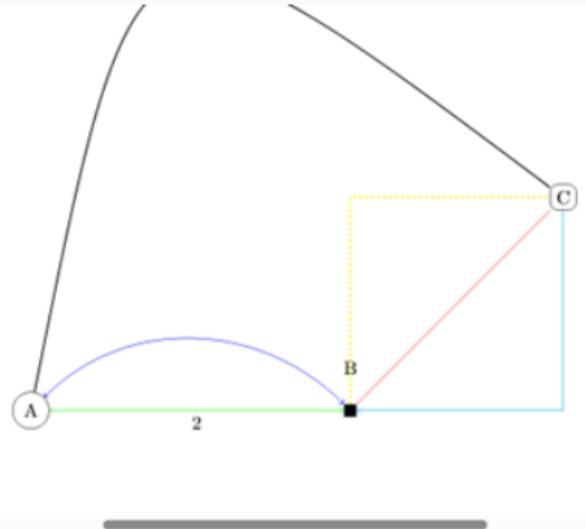
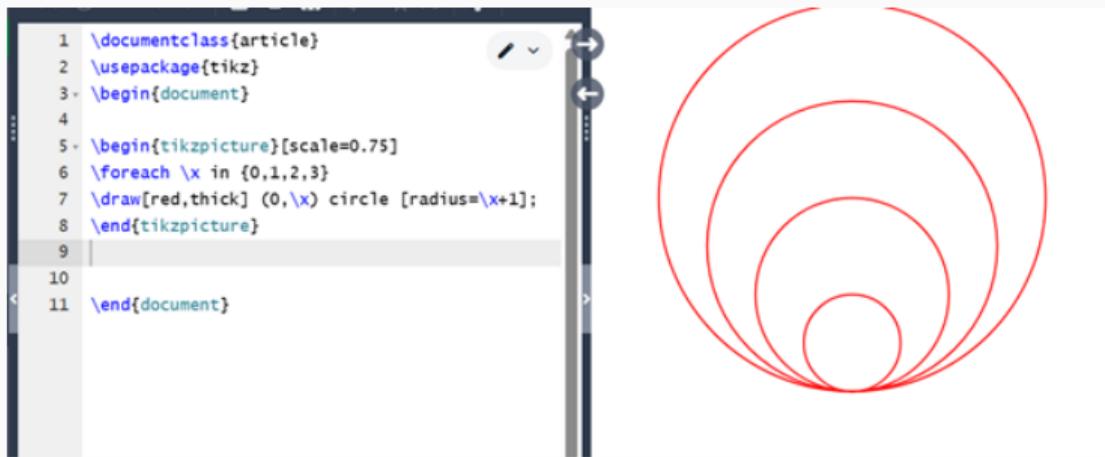


Рис. 6: LaTeX

Работа с графиками



The image shows a screenshot of a LaTeX editor. On the left, there is a code editor window containing the following LaTeX code:

```
1 \documentclass{article}
2 \usepackage{tikz}
3 \begin{document}
4
5 \begin{tikzpicture}[scale=0.75]
6 \foreach \x in {0,1,2,3}
7   \draw[red,thick] (0,\x) circle [radius=\x+1];
8 \end{tikzpicture}
9
10
11 \end{document}
```

On the right, the output of the code is displayed as a series of four concentric red circles of increasing radius, centered at the origin.

Рис. 7: LaTeX

Выводы

- Познакомилась с LaTeX
- Изучила новый пакет
- Научилась создавать графики

Спасибо за внимание!