

Neustroeva A.V.

student

Branch rgppu in N. Tagil

Volkova E.A.

Ph. D., associate Professor

Branch rgppu in Nizhny Tagil

Nizhny Tagil, Russia

THE INTERACTIVE CAPABILITIES OF THE MATHEMATICAL PACKAGE SMART NOTEBOOK MATH TOOLS TO TEACH GEOMETRY

Annotation

The article considers the possibility of using mathematical package when working in Smart Notebook program. Showing and given the task, and provides step by step actions to implement them.

Keywords: media, Smart Notebook Math Tools, mathematical tools, protractor, ruler, compass.

Nowadays many countries of the world are modernizing an education system on the basis of wide use of information and communication technologies which offer new prospects and opportunities for training. And this is confirmation that the mankind is on a threshold of educational revolution.

One of the most important directions of application of the information communication technologies (ICT) in education is the use of multimedia opportunities of computer equipment. This ICT means allow people to intensify process of training due to strengthening of presentation and a combination of logical and figurative ways of assimilation of information. Interactivity of multimedia technologies gives ample opportunities for realization of the personal focused training models.

This set of ICT is an assistant in speed of creation of tasks, saving of time, automatic check of exercises. We will get acquainted with the software of Smart Notebook and we will consider the tasks be developed by us which can be applied in school practice.

As the statistics shows, the program SMART Notebook environment is the most popular program for creation and carrying out lessons on interactive boards as over 20 000 000 people use it worldwide. This program has a large amount of advantages. Firstly, the program SMART Notebook environment allows, both to create the new interactive animated lessons, and to unite all earlier created training materials in all widespread programs, such as Word, Excel, PowerPoint, to include this Wednesday the existing digital educational resources from any sources: Internet, flash animation and video files. Secondly, this program does your homework more fascinating. This is a good incentive for increase of interest of school students in study. Thirdly, the program contains the gallery which is specially developed for teachers in which there

are more than 7000 interactive resources in various subjects. Fourthly, you will bring your lessons to new level thanks to expanded mathematical tools, work with 3D models, to inclusion of interactive polls and record of all events on a board in video format. Also you will be able to exchange with colleagues the practices, to receive the fast and qualified help of specialists with ON SMART Notebook and many other things.

We would like to show you a small grant on geometry "Draw, compare, measure" with use of SMART Notebook. It comprises some tasks:

1. To measure corners and to put the corresponding value (see Fig. 1). It is necessary to use "Instruments of measurement" which are on the control panel measuring a corner.

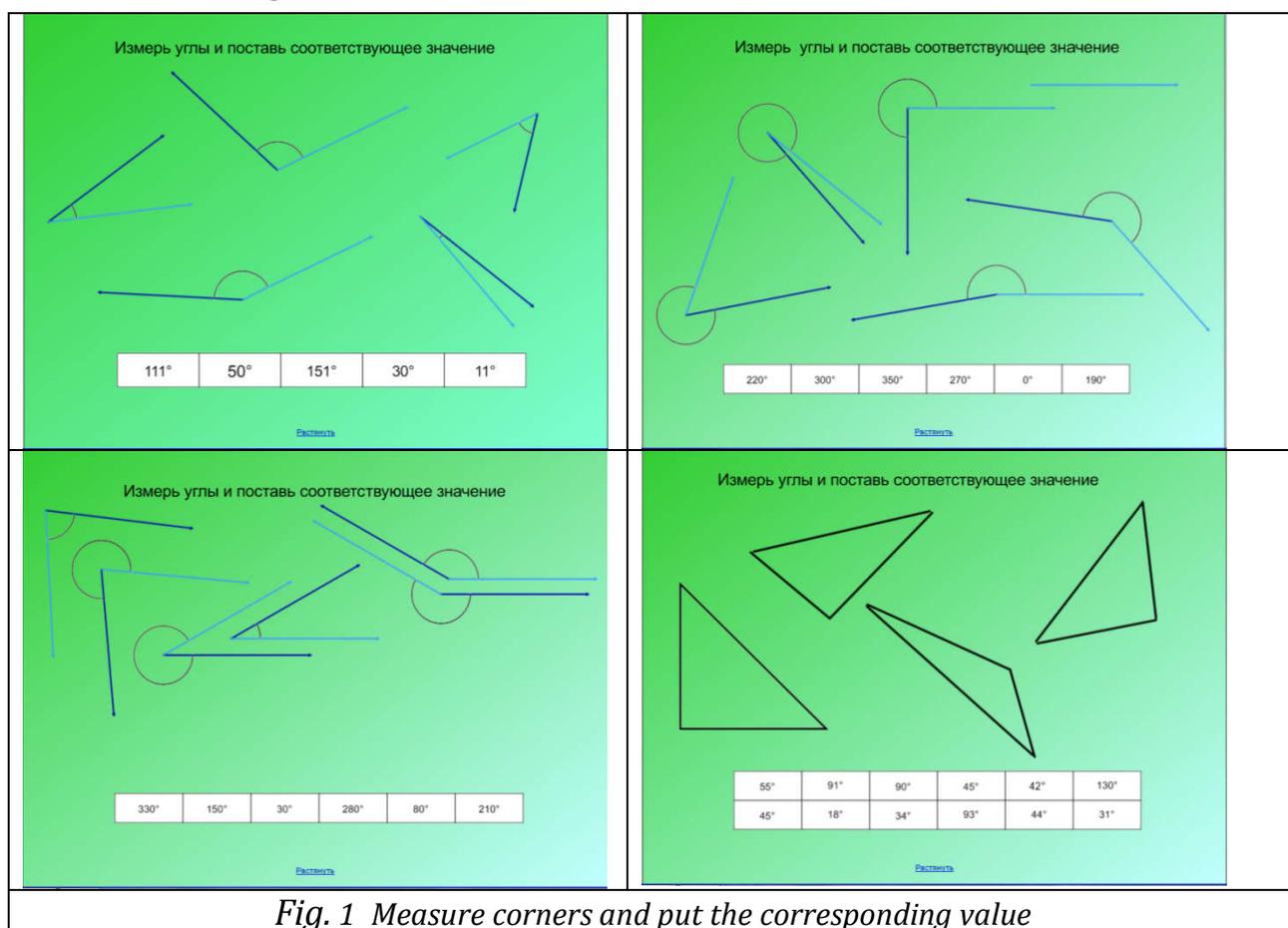
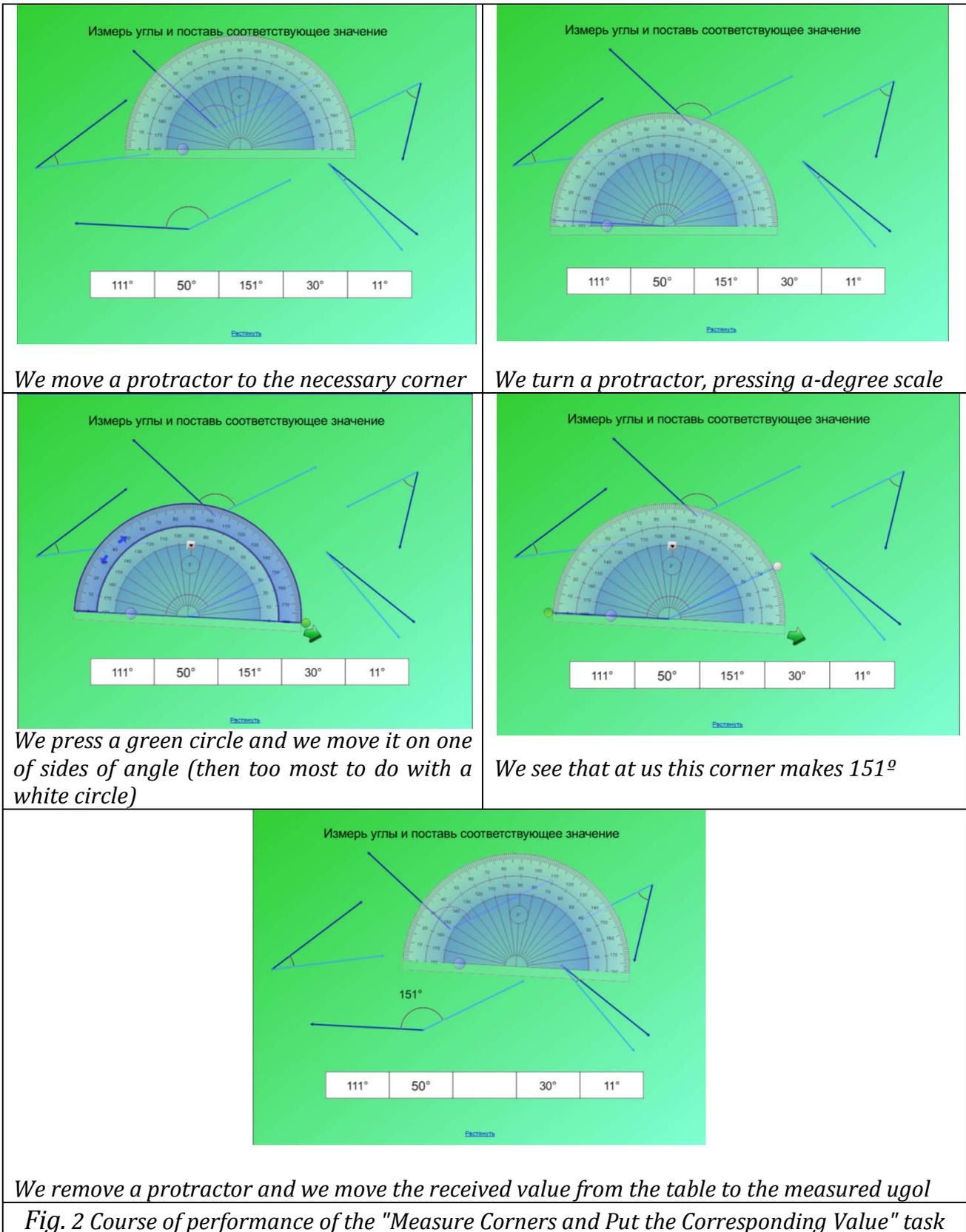


Fig. 1 Measure corners and put the corresponding value

Having chosen this key, clicking with right mouse button, the list of tools, such as is offered to us: ruler, protractor, Geodreyek, compasses. For performance of this task we choose a protractor by means of which we will measure corners. Let's consider one option from a task (other tasks are performed by analogy) (see Fig.2).



2. Compare corners

This task is identical to previous one in which we considered all steps of performance of measurement in detail. In it there is only an insignificant difference (see Fig. 3)

Сравни углы						
№	Углы	№	Углы	>	<	=
1		2		1		2
3		4		3		4
5		6		5		6
7		8		7		8

We choose at a toolbar a protractor (see the description of 1 task)

Сравни углы						
№	Углы	№	Углы	>	<	=
1		2		1		2
3		4		3		4
5		6		5		6
7		8		7		8

We move a protractor to a corner and we measure it (see the description of 1 task)

Сравни углы						
№	Углы	№	Углы	>	<	=
1		2		1	>	2
3		4		3		4
5		6		5		6
7		8		7		8

Having measured the first corner, we pass to the second. We notice that the first corner is more than second corner

Сравни углы						
№	Углы	№	Углы	>	<	=
1		2		1	>	2
3		4		3		4
5		6		5		6
7		8		7		8

We move from the top column a sign necessary for us, in this case «>»

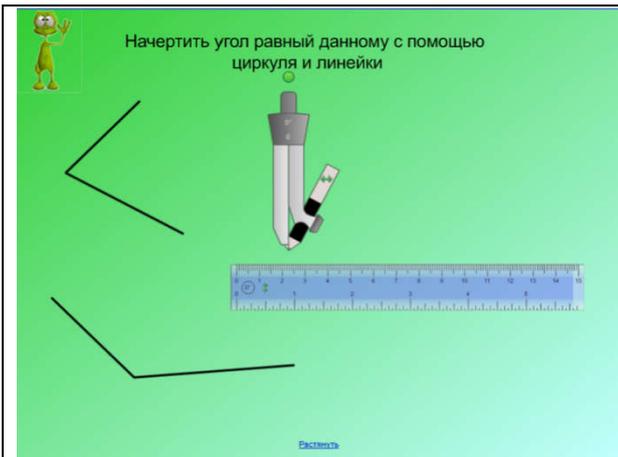
Fig. 3 Course of performance of a task «Compare corners»

3. To draw a corner / triangle equal given by means of compasses and a ruler (see Fig. 4).

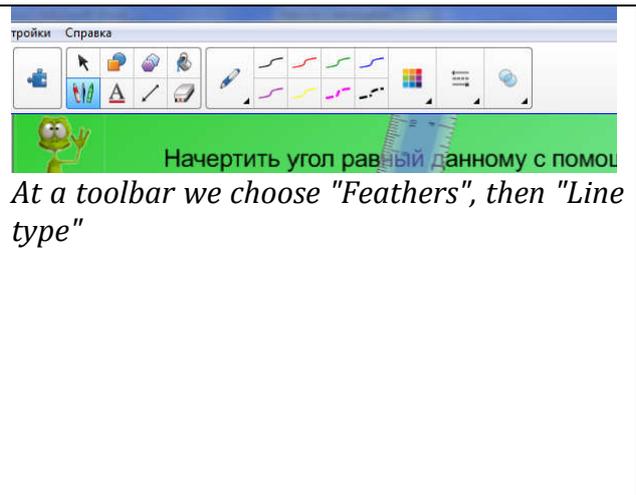
<p>Начертить угол равный данному с помощью циркуля и линейки</p>	<p>Начертить треугольник равный данному с помощью циркуля и линейки</p>
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Fig. 4 To draw a corner / triangle equal given by means of compasses and a ruler

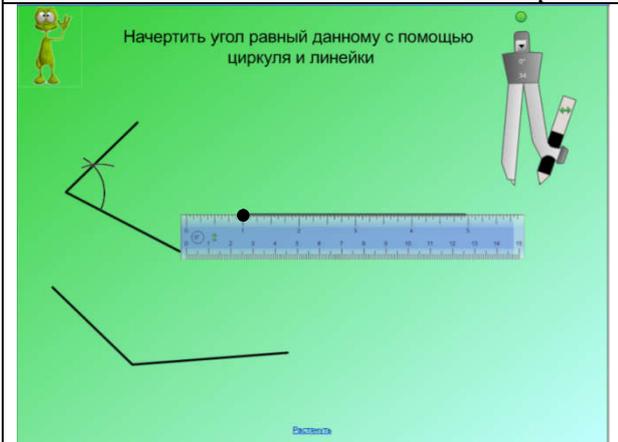
Let's consider one of tasks in detail. Let's construct a corner equal to a given one (see Fig. 5).



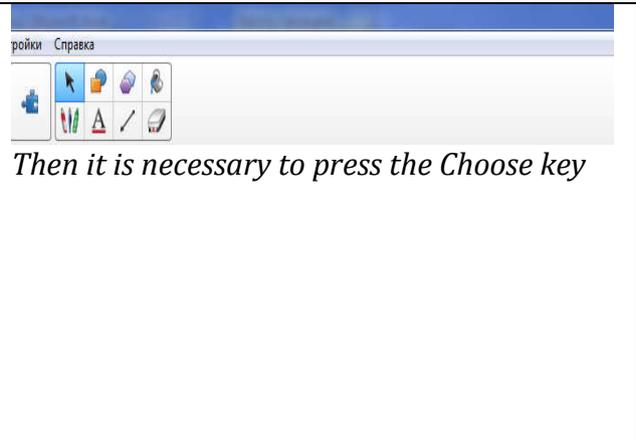
At a toolbar we choose a ruler and compasses



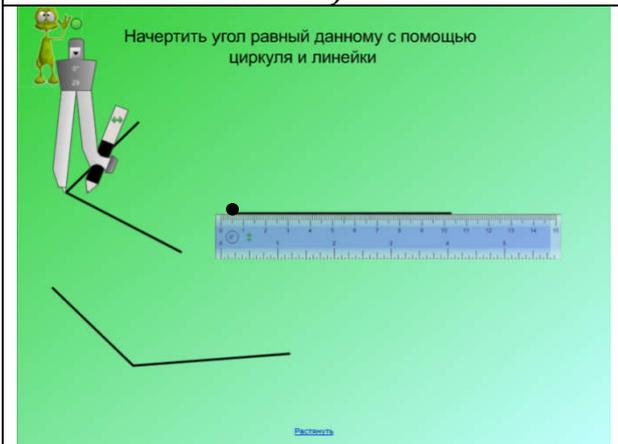
At a toolbar we choose "Feathers", then "Line type"



Having chosen the line, we carry out it along a ruler (the ruler can also be moved, having pressed its middle, and to turn on the necessary corner, having pressed divisions of a ruler into centimeters)



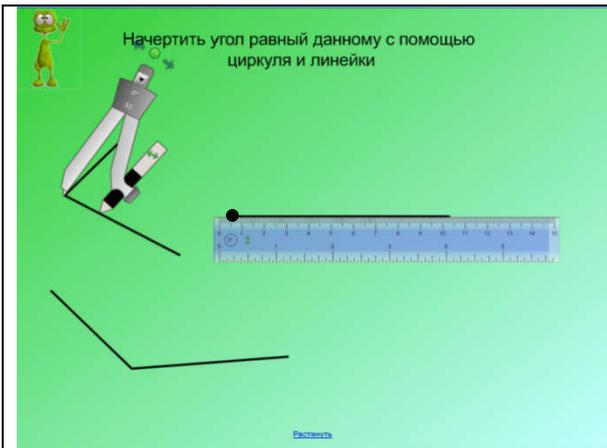
Then it is necessary to press the Choose key



We move compasses to this corner, pressing a long leg



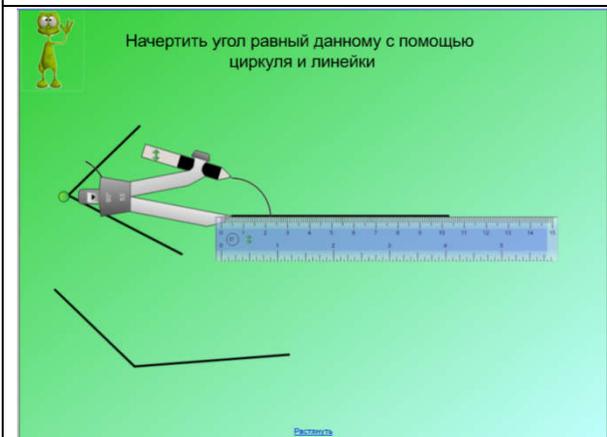
Pressing a smaller leg of compasses, we can establish distance, convenient for us, between compasses legs



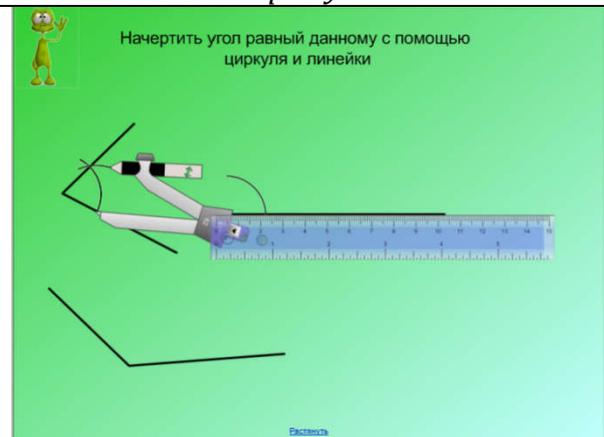
Also we can turn compasses, pressing a green circle



Further pressing a pencil, we carry out a circle arch so that it went from one side of angle, to another. For convenience it is better to cross the second party



We transfer and turn compasses on the straight line constructed by us, then we carry out an arch, without changing distance between compasses legs



We come back to this corner. We transfer compasses, so that the big leg stood on the beginning of the arch which is carried out by us. In order that the smaller leg of compasses appeared on the other hand, it is necessary to press on it green arrow. After we turn compasses before such situation that solution of a smaller leg appeared on crossing of the first arch and side of angle, then we carry out an arch



We come back to our construction. We put a



We take a ruler, we have it so that it crossed

<i>big leg of compasses in crossing of an arch and beam. Then we carry out the second arch so that it crossed the first</i>	<i>the beginning of a beam and the received point, we choose line type, we draw a straight line. Corner equal to this construction</i>
<i>Fig. 5 Course of performance of the "Draw a Corner Equal Given by means of Compasses and a Ruler" task</i>	

Thus, it is possible to draw a conclusion that the SMART Notebook program is a good assistant for mathematics teacher. It is equipped with various tools which are capable of giving the evident picture of the course of steps when performing various tasks.

With the correct use of SMART Notebook process of training becomes more various and more interesting. Different types of activities which can be organized only using the program, allow to motivate pupils to do this or that task, the process of training for modern school students be more fascinating.