

## FRACTIONS AND OPERATION WITH FRACTIONS, USING OF INTERACTIVE TABLE

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**Abstract:** In this paper we will consider the advantages about using the interactive table in the mathematics class during the educational process. Students are in the center of each process of education, so we look for a different methods to make easier, simplest and fast approve of the knowledge. Using this interactive table in the education, we have a lot of positive affects because with it the work of the teachers gets easier, the students learn new knowledge simply, and most important of all we receive great attention. In this paper we will regard organization on mats classes, for approve new contain – fractions and operation with fractions.

Keywords: Fraction, interactive table

### Introduction

When we are talking about an education actually we means a process which is affected from the social life. We can say that with better quality of life and advancement of the technology the education is development too. All news in technology affects on a society and with better social life we have a better educational process. With using on technology invention education became successful, more interesting and is easier for understand from the children. In the center of focus in each educational process is a child, so we are looking different ways to make the education easier process. We can say that with using a interactive white table in the education, the education became easier, the teachers work is more easier than before, and the most important thing is that we can easy keep the children’s attention. The traditional process of organization of class usually can be monotony for the children. With using a interactive white table, the class became more interesting, because the children are included in the process of organization. As well as the children successfully absorb the new knowledge and achieve better result.

### Interactive white table

The **SMART Board interactive whiteboard** is a product of SMART Technologies. It is a large, touch-controlled screen that works with a projector and a computer. The projector puts the computer’s desktop image onto the interactive whiteboard, which acts as both a monitor and an input device.

The first SMART interactive white table is produced in 1991. It was sample but has some of the same function as the modern interactive white table. It was the first interactive table which accomplish control with touch (contact) on computers applications and annotation on standard Microsoft Windows applications.

An interactive whiteboard is a large interactive display that connects to a computer and projector. A projector projects the computer's desktop onto the board's surface, where users control the computer using a pen, finger or other device. The board is typically mounted to a wall or on a floor stand. They are used in a variety of settings such as in classrooms at all levels of education, in corporate board rooms and work groups, in training rooms for professional sports coaching, broadcasting studios and more.

Interactive whiteboards are used in many schools as replacements for traditional whiteboards or flipcharts or video/media systems such as a DVD player and TV combination. In addition, some interactive

whiteboards allow teachers to record their instruction as digital video files and post the material for review by students at a later time. This can be a very effective instructional strategy for students who benefit from repetition, who need to see the material presented again, for students who are absent from school, for struggling learners, and for review for examinations.

In most cases, the touch surface must be initially calibrated with the display image. This process involves displaying a sequence of dots or crosses on the touch surface and having the user select these dots either with a stylus or their finger. This process is called alignment, calibration, or orientation. Fixed installations with projectors and boards bolted to roof and wall greatly reduce or eliminate the need to calibrate. A few interactive whiteboards can automatically detect projected images during a different type of calibration.

A variety of accessories is available for interactive whiteboards:

- Projector — Allows a computer display to be projected onto the whiteboard. 'Short Throw' projectors are available from some manufacturers that mount directly above the board minimizing shadow effects. 'Ultra Short Throw' projectors are even more effective.
- Track — Allows the whiteboard to be placed over a traditional whiteboard or tackboard to provide additional wall space at the front of the room. Some tracks provide power and data to the whiteboard as well.
- Mobile stand — Allows the interactive whiteboard to be moved between rooms. Many are height adjustable as well.
- Printer — Allows copies of the whiteboard notes to be made.
- Slate or tablet — Allows students control of the whiteboard away from the front of the room.
- Personal Response System — Allows students to answer test questions posted on the whiteboard or take part in polls and surveys.
- Wireless unit — Allows the interactive whiteboard to operate without wires to the computer, e.g. Bluetooth.
- Remote control — Allows the presenter to control the board from different parts of the room and eliminates on-screen toolbars.

The SMART Board software bundle comprises Notebook white boarding software and SMART Board Tools. Versions are available for Windows, Mac, Linux, Solaris and SGI (Irix) operating systems.

SMART Board Tools are the start centre, spotlight, screen shade, magnifier, floating tools, on-screen keyboard, LinQ software, video player and recorder. And the notebook is also good for teaching and printing.

The SMART Board interactive whiteboard works with any program loaded or available on the host computer. Some applications commonly used with the SMART Board interactive whiteboard are Microsoft PowerPoint, Excel and Word, and AutoCAD. Uses for the SMART Board interactive whiteboard include teaching<sup>[4]</sup>, training, conducting meetings, and delivering presentations.

Interactive whiteboards are generally available in two forms: front projection and rear projection.

- Front-projection interactive whiteboards have a video projector in front of the whiteboard. The only disadvantage to these boards is that the presenter must stand in front of the screen and their body will cast a shadow. Presenters quickly learn to compensate for the shadow by slightly extending their arm with or without a stylus. This disadvantage is mitigated when using an Ultra-Short-Throw (UST) projector, which casts its beam from above and just in front of the IWB surface, removing the presenter from the beam's path.

- Rear-projection interactive whiteboards locate the projector or emissive display behind the whiteboard sensing surface so that no shadows occur. Rear-projection boards are also advantageous because the presenter does not have to look into the projector light while speaking to the audience. The disadvantages of these systems are that they are generally more expensive than front-projection boards, are often very large, and cannot be mounted flush on a wall; however, in-wall installations are possible.

Some manufacturers also provide an option to raise and lower the display to accommodate users of different heights.

### Front projection



Works with your existing projector and computer

### Rear projection



Includes an integrated projector. Can be a mobile unit or permanent installation.

### Interactive display



Transforms your existing plasma or LCD display in an interactive solution.

1. Interactive whiteboards with front projection and rear projection.

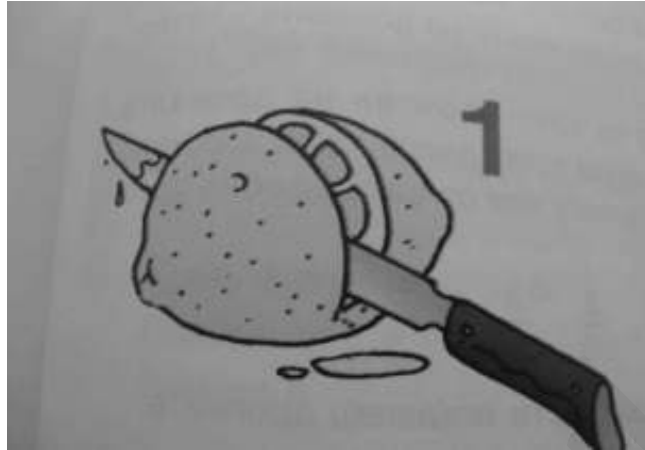
### Short-Throw Projection Systems and Interactive Whiteboards

Some manufacturers offer short-throw projection systems in which a projector with a special wide angle lens is mounted much closer to the interactive whiteboard surface and projects down at an angle of around 45 degrees. These vastly reduce the shadow effects of traditional front-projection systems and eliminate any chance for a user to see the projector beam. The risk of projector theft, which is problematic for some school districts, is reduced by integrating the projector with the interactive whiteboard.

### Use the interactive white table in the mathematics class

We will explain how the interactive table can be used for easier and more clearly understanding on concept of fraction. To keep the children attention we start the class with one simple example. \

Example 1: One lemon is separated of two peer parts. We gain two half. When again we combine two half we gain one whole.



### 2. Lemon separate on two parts

Example 2. One square is separated of four peer parts. We can colour these parts in different color. For example we show a quadrat which is separate on fort part and tree of them are in black color. The parts with black color show the salient parts and the number four is showing how many parts have the all object.



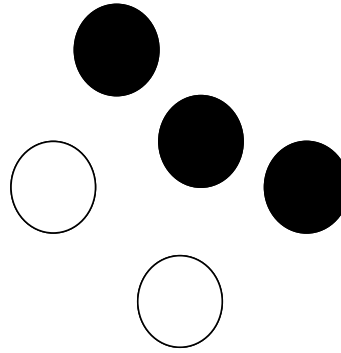
### 3. square separated on four parts

After, we show them some others examples of object which are separated differently on more parts.

We should include the children in the educations process, with exercise which they should done. We show different fraction to the children and they should separated objects with the correctly part, and color the necessary parts.

We explain to the children, that any fraction is containing from denominator and numerator. On which parts is separate fraction is shown by denominator, and how many parts are taken from them is shown by numerator.

[We show them set with 5 elements, from which 3 are in black color and 2 are white. We explain that with black elements from the set, we shown the fraction  $\frac{3}{5}$ . After that, we give on the children exercise with sets and they should write the true fraction behind them.

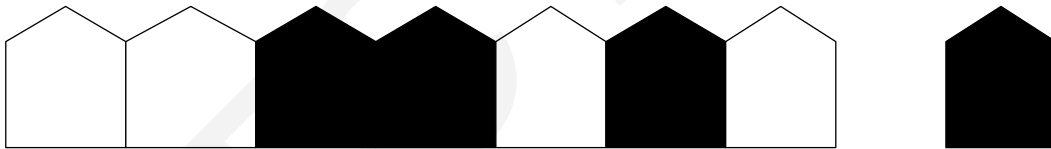


4. set with 5 elements

We explain them that the fraction can be used in practical exercise. We give example with dividing, as the example when the number 8 is separated in 2 parts (at the same time, we show this and on interaction table). We give example, how many is  $\frac{1}{3}$  from the number 6, and children solution similar example alone. From this we conclude that the children have understood the concept of fraction.

On following example, we show one object which is contain from 6 parts, 3 parts are in white color and 3 in black color. The children should color object on other way, but whit same colors and 3 part with black and 3 with white. From this exercise, they should to understand that is not important where the part is based, but is important to still 3 parts, and that the fraction is  $\frac{3}{6}$ .

With following example, we regard fence which is color in different color. We ask children how many parts from fence are color black and how many white.



5. fence which is color in different colors

We explain to the children, that we can do operation with fraction, ass addition and subtraction. We show some examples with addition, as  $\frac{1}{4} + \frac{1}{4}$ . We explain them, that we should to add 1 and 1, and result is 2. Because denominator is equal for the two fractions, the result of addition is  $\frac{2}{4}$ . After this, the children do addition with fraction themselves. Also, we show some examples with subtraction on fraction. For example, we explain, which fraction will be gain if from the fraction  $\frac{3}{4}$  is subtraction the fraction  $\frac{1}{4}$ . We explain that we should to calculate  $3 - 1 = 2$ . And because the denominator is equal for the two fractions, the result is  $\frac{2}{4}$ . After, the children do subtraction with fraction themselves. \

### Conclusion

When we use the news of the technology we make the education process closer, more interesting and easier for understanding.

If we want to have an interesting and successful class we should use interactive white board and the results are infallible. They have positive impact on the children attention and to increase the children motivation.

We use interactive white board in elementary school for replacing the traditional table, audio and visual aids.

### **Literature**

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