

# Variant Limits in math classroom: Students attitudes

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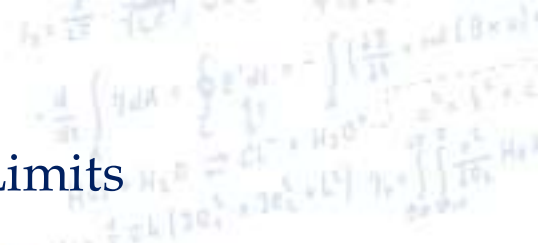
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Expert's seminar: Evidence-based development of serious games for the educational sector  
12 September 2018, Brussels



# Learning Scenarios

## for implementation Triseum Variant Limits

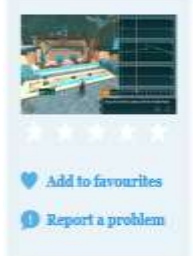


### APPROACHING THE CONCEPT OF LIMITS OF FUNCTIONS



**Users' Tags:**  
**Descriptor:** information and communications technology (ICT) mathematics software  
**Age range:** 14 - 19  
**Resource type:** lesson plan  
**Creative commons:**   
**Project:** TRISEUM  
**Author:** Panagiota Argyri

### LAW OF LIMITS



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6

### TRISEUM GAMES – REACHING THE INFINITE



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## *Variant Limits in Math classroom*

### *Additional educational value*



- Game based learning via Variant Limits increased the level of mathematical knowledge.
- Preparation for university exams.
- Students are capable to solve mathematical problems 3 levels higher in their current curriculum.
- Both girls and boys enjoy their participation and have very positive
- Girls are more activate than boys.



## VARIANT: LIMITS STUDENT QOUTES

“The game was very interesting and fun causing us to forget we were learning at the same time. It would be really great to create more of these types of learning games since learning through experience is always better than trying to understand theory.”

- George

## VARIANT: LIMITS STUDENT QOUTES

“The game was amazing. It wa difficult at the beginning but when I undertand it I had an amazing time playint it. It has mathematics that are for more advanced student but I hope it will be very helpful in the near future.”

- Orestis

## VARIANT: LIMITS STUDENT QOUTES

“I found this game really entertaining and unique. It involves features that other educational games lack, like state-of-the-art graphics, simple but at the same time clever and interesting puzzles, as well as a particularly captivating backstory. As for the maths involved, it really helped me understand concepts I had never encountered before, and the fact that the game itself does not provide solid methods on how to solve these mathematical problems helps the player develop their critical thinking, imagination and deductive skills.”

- Sophia

## VARIANT: LIMITS STUDENT QOUTES

“Triseum is a different way of getting to know more about math and especially limits, which is a unit we have not studied yet. It’s plot is quite interesting, keeping the gamer going and showing us a more amusing way of solving math problems with an escalating level of difficulty. Also, as students, we are more used to studying the theoretical parts and then applying them, something that did not happen here considering we had to figure out on our own how to pass each level as well as the theory it was based on, which was pretty intriguing.”

- Adriana





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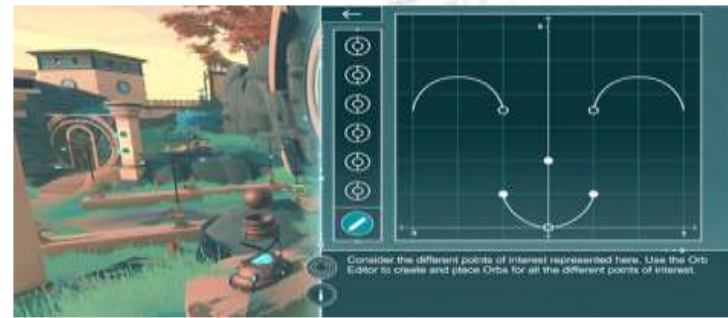
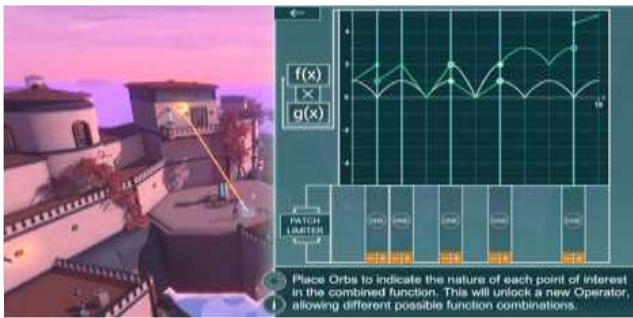


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## Results

- ❑ Increasing activity of students in learning mathematics
- ❑ Changing students' behavior
- ❑ Achieving new skills (analytical critical thinking, problem solving, communication skills, team working)
- ❑ Acquiring new knowledge



## Conclusions

- ❖ Triseum Game based learning is a unique innovative way for bringing the science of mathematics very closer to your students
- ❖ Triseum game based learning include all important key words for mathematical curriculum: **'learning by doing'** ; **'motivations in study mathematics'** ; **'cultivation the self-confidence, the productive and analytical thinking'** ; **'increasing mathematical knowledge level'** ; **'each graphical representations include one thousand positive attitudes of the importance of math'**