

### TI-Nspire Activity: Order of Operations

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#### Activity Overview

This activity allows the students to solve problems manually by using the correct order of operations or by using a scientific calculator.

To do this The Calculator generates four random numbers that students must use for one time only the first three numbers, and manipulate them in able to get the fourth one. They can add, subtract, multiply, divide, take roots, power them or apply any math operation. Since there are different ways to get the solutions, teacher will allow five minutes for each exercise. The student's work must be shown in the calculator.

## **Concepts**

Solve problems manually by using the correct order of operations or by using a scientific calculator. California Standard 1.4 for Algebra 1

## **Teacher Preparation**

Teacher must have a projector and the TI-Nspire simulator ready

#### The Classroom.

All students must have a graphic calculator to solve the exercise generated by the teacher's calculator.

Teacher projects some examples to explain what he/she is expecting from the students.

# The Document

The Calculator generates four random numbers between 1 and 25

	1/99
randInt(1,25,4)	{8,3,25,5}
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Students must use these numbers and the Calculator to generate a sequence of operations where the first three numbers are used to get the fourth one as the solution.

Most of the time is possible to get the exact number, but in case that is not possible, the teacher can accept if the students get the next closest number, in this case an acceptable answer would be 4 or 6.

randInt(1,25,4)	{8,3,25,5}
25/(8-3)	
	1/99
randInt(1,25,4)	{8,3,25,5}
randInt(1,25,4)	{8,3,25,5} 5
$\frac{\operatorname{randInt}(1,25,4)}{\frac{25}{8-3}}$	{8,3,25,5} 5 

The teacher can easily see in the calculator screen the process that the students have done to solve the exercises.

This activity has been tried with students of Pre-Algebra, Geometry and Pre-Calculus.

The more math concepts they have, the faster and more sophisticated ways the use to solve the problem. It has been proved to be an activity that they all come to like.