Hind Ali

* Mathematical Topic: Exponent Rules
* General Purpose: to learn five rules of exponent and how to use them.
* Overview: How to apply the rules of exponents
* Learning Objective/Common Core State Standard:

CCSS.MATH.CONTENT.HSA.SSE.B.3.C

Use the properties of exponents to transform expressions for exponential functions. For example the expression 1.15t can be rewritten as (1.151/12)12t ≈ 1.01212t to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.

* Grade level(s): Ninth Grade
* Background knowledge required of students:

Students know the definition of exponents and the low of exponents.

* Time: 30 minutes
* Materials needed:
* Scissors
* tape
* Glue
* Basic calculators
* Type of activity: puzzle “Math is Exponentially Fun!”
* Why I picked this activity: this activity will help students in organizing the knowledge of the exponent rules.
* Follow-up activities/extensions:
* Algebraic expressions provided may be replaced with all numerical expressions.
* Weaknesses/limitations of activity: the puzzle can be cut apart ahead of time and put into a bag. Then, if not glued together pieces can be used from year to year and students with difficulties do not have to cut or glue.
* Procedure:

The students are given the handout and they cut the rectangles apart. Then, put the pieces back together forming a 4 by 4 rectangle just like the original so that the sides that touch are equivalent expressions. Students can glue the rectangles to a sheet of notebook paper. The letters in the middle of the individual rectangles do not assist in putting the puzzle together; they are to help the teacher grade the puzzle. Sides of the individual pieces that do not have any written expression will be on the outside of the 4 x 4 rectangle which will help the student solve the puzzle.

* Source: <http://www.cpalms.org/uploads/Resources/final/49108/Document/13036/DOC%204%20CLOSURE.pdf>