

Date \_\_\_\_\_ Class Period \_\_\_\_\_ Name \_\_\_\_\_

# Negative Exponents

File: Negative Exponents

TN standards 2009-2010:

Seventh grade:

- ✓ **0706.2.13** Use the meaning of negative exponents to represent small numbers; translate between scientific and standard notation.

In this activity, you will:

- create a rule for evaluating negative exponents
- use negative exponents to represent small numbers


## Exponents

Review:  $4^5$

- \*four is the base
- \*five is the exponent
- \* we say, "four raised to the fifth power"

## Negative Exponents

Use  and  (on the nav pad) to move to the next page.

On page 1.2, there are several examples illustrating how expressions change when an exponent is negative. Use  on the nav pad to scroll down the page. Based on your observation of these examples, **explain how negative exponents work.** (How would you evaluate an expression with a negative exponent?)

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

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Test out your theory by trying some examples of your own. (press  before the exponent)

Fill in the table.

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Base	Exponent	Value	Value when exponent is negative (as a fraction)	Value when exponent is negative (as a decimal) press  
4	5	1024	$\frac{1}{1024}$	0.000977

Make a rule for evaluating negative exponents:

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Why are negative exponents needed?

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What is one specific example when a negative exponent might be used?

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Now it's time for a partner check. Compare your work to someone close to you. If you have different answers, come to an agreement as to what the correct answer is. If necessary, consult one other student. Have your partner sign in the ☺ blank.

☺ \_\_\_\_\_ (Turn in your paper)