Name _____

Home-School Connection
Topic **2**

Real Numbers

Dear Family,

Your child is learning to identify and work with different types of real numbers, such as integers, rational numbers, and irrational numbers. This will include comparing real numbers, evaluating square roots and cube roots, simplifying expressions involving exponents, and working with numbers written in scientific notation.

Here is an activity to help your child understand positive and negative exponents.

What's the Greatest?

Materials: A standard deck of playing cards with the face cards removed

Step 1 Shuffle the cards and place four cards face up. Red cards represent negative numbers and black cards represent positive numbers. For example, the cards shown below represent 5, -6, 2, and -3.

Step 2 Working with your child, arrange the given numbers to form an expression containing exponents. For example, using the cards above, you could write $5^{-3} + (-6)^2$. Then simplify the expression with your child.

$$5^{-3} + (-6)^2 = \frac{1}{5 \cdot 5 \cdot 5} + (-6) \cdot (-6)$$
$$= \frac{1}{125} + 36 = 36\frac{1}{125}.$$

Challenge yourselves to find an exponential expression with the greatest possible value using these numbers.

Observe Your Child

Focus on Mathematical Practices
Model with mathematics

Help your child become proficient with this Mathematical Practice. Find a fact or statement that contains a number written in scientific notation, such as "The Andromeda Galaxy is 2.5×10^6 light years away." Help your child understand that writing 10^6 as 1,000,000 and performing the multiplication shows that 2.5×10^6 is equivalent to 2,500,000.