## Learning Targets

### Exponents and Scientific Notation

### Lesson 1: Exponent Review

* I can use exponents to describe repeated multiplication.
* I understand the meaning of a term with an exponent.

### Lesson 2: Multiplying Powers of Ten

* I can explain and use a rule for multiplying powers of 10.

### Lesson 3: Powers of Powers of 10

* I can explain and use a rule for raising a power of 10 to a power.

### Lesson 4: Dividing Powers of 10

* I can evaluate $10^{0}$ and explain why it makes sense.
* I can explain and use a rule for dividing powers of 10.

### Lesson 5: Negative Exponents with Powers of 10

* I can use the exponent rules with negative exponents.
* I know what it means if 10 is raised to a negative power.

### Lesson 6: What about Other Bases?

* I can use the exponent rules for bases other than 10.

### Lesson 7: Practice with Rational Bases

* I can change an expression with a negative exponent into an equivalent expression with a positive exponent.
* I can choose an appropriate exponent rule to rewrite an expression to have a single exponent.

### Lesson 8: Combining Bases

* I can use and explain a rule for multiplying terms that have different bases but the same exponent.

### Lesson 9: Describing Large and Small Numbers Using Powers of 10

* Given a very large or small number, I can write an expression equal to it using a power of 10.

### Lesson 10: Representing Large Numbers on the Number Line

* I can plot a multiple of a power of 10 on such a number line.
* I can subdivide and label a number line between 0 and a power of 10 with a positive exponent into 10 equal intervals.
* I can write a large number as a multiple of a power of 10.

### Lesson 11: Representing Small Numbers on the Number Line

* I can plot a multiple of a power of 10 on such a number line.
* I can subdivide and label a number line between 0 and a power of 10 with a negative exponent into 10 equal intervals.
* I can write a small number as a multiple of a power of 10.

### Lesson 12: Applications of Arithmetic with Powers of 10

* I can apply what I learned about powers of 10 to answer questions about real-world situations.
* I can tell whether or not a number is written in scientific notation.

### Lesson 13: Multiplying, Dividing, and Estimating with Scientific Notation

* I can multiply and divide numbers given in scientific notation.
* I can use scientific notation and estimation to compare very large or very small numbers.

### Lesson 14: Adding and Subtracting with Scientific Notation

* I can add and subtract numbers given in scientific notation.

### Lesson 15: Is a Smartphone Smart Enough to Go to the Moon?

* I can use scientific notation to compare different amounts and answer questions about real-world situations.



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