**ML #1: Exponents (Exponents Unit math 7 Plus)**

**Part l: Vocabulary: Base Exponent Expression Exponential Form**

**Part II: Exponent/Exponential Form Review**

* **Write each of these expressions in exponential form.**

1. **b) -2 c) 4**

* **Determine the value of each of these expressions.**

1. b) c) -32 d) n3  for n = 5

**Part llI: Basic Exponent Rules**

**Complete the following Tables. Look for patterns and generalization you can make concerning exponents.**

|  |  |  |
| --- | --- | --- |
| **2x** | **5x** | **10x** |
| **24 =** | **54 =** | **104 =** |
| **23 =** | **53 =** | **103 =** |
| **22 =** | **52 =** | **102 =** |
| **21 =** | **51 =** | **101 =** |
| **20 =** | **50 =** | **100 =** |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| **What do you notice…** | **Rule** |
| **about any nonzero number to the power of zero?**  Ex: 60  or x0 | **For every nonzero number x, x0 (power of zero)** |
| **would happen if we extend the pattern in the tables?** | **For every nonzero number x, x-a (negative power)** |

* **Simplify**

1. **6-3 2) h0 3) -3xy-4 4)**

* **Evaluate for a = 3, b = -2**

1. **4a2b-3 2) a-3 3) b-2**

* **Write using negative exponents**

1. **2) 3) 4)**

Practice for Exponents Unit ML #1 (Math 7+)

1. Write each of these expressions in exponential form.

a) (-6) • (-6) • (-6) = = d) 9 =

1. Determine the value of each of these expressions.
2. b) c) -52 d) n3  for n = -4
3. Simplify each expression.

4. To find the sum of the first *n* positive numbers you can use the formula

a)What is the sum of the first 7 positive numbers?

b)What is the sum of the first 30 positive numbers?

1. Simplify

a) -7g-2 b) (-4.6)0  c)

1. Evaluate for a = 3, b = -2

a) 4a-4b2 b) a-2 c) b-4

1. Write using negative exponents

a) b) c) d)