**Exponents, Negative Numbers and Parentheses Practice 1**

Evaluate. PARENTHESES EXPONENT RULE: Exponents without parentheses is just for the number.

1. (-2)2
2. (-1)13
3. -22
4. (-2)4
5. (-1)4
6. (-3)3

Evaluate. ZERO-EXPONENT RULE: Exponents of 0 equals 1 (X0 = 1)

1. 20
2. -10
3. 40
4. 120
5. -20
6. (-13)0

Evaluate. PRODUCT RULE: To multiple exponents of the same base, keep the base and add the exponents

 (X2 • X3 = X5)

1. 32 • 33 =

1. 51 • 54 =
2. 22 • 23 =
3. 42 • 43 =
4. 62 • 63 =
5. X3 • X5 =

Evaluate. QUOTIENT RULE: To divide exponents of the same base, keep the base and subtract the exponents: X6 = X6-2 = X4

X2

1. 46 =

42

1. 55 =

51

1. 29 =

27

1. 68 =

65

1. 87 =

87

1. X4 =

X3

**Exponent Terms and Rules**



**Exponential expression or Exponential form** uses the exponent: 43.

**Expanded form** or **Distributed notation** turns the exponent into a multiplication problem: 4 • 4 • 4.

**Consider** or **Evaluate** mean to solve.

**Zero-Exponent Rule:** a0 = 1, this says that anything raised to the zero power is 1.

**Product Rule**: am ∙ an = am + n, this says that to multiply two exponents with the same base, you keep the base and add the powers.

**Quotient Rule**: , this says that to divide two exponents with the same base, you keep the base and subtract the powers.

**Power Rule** (Powers to Powers): (am)n = amn, this says that to raise a power to a power you need to multiply the exponents.

**Negative Exponent Rule**: , this says that negative exponents in the numerator get moved to the denominator and become positive exponents.