SOL 6.5 – Exponents

The Meaning of Exponents

- Where repeated addition is multiplication, repeated multiplication is the use of exponents
- The **Base** is the "**Big number**" which is the number to be repeated
- The **Exponent** is the "**Floaty number**" which tells how many times the **Base** is to be repeated.

Exponential Form	Word Form	Expanded Form	Standard From
2^4	**2** to the **fourth power**	**2×2×2×2**	16

How to enter into the Calculator

Problem: 3^5 → Type: **3** y^x **5** **=** → Answer: **243**

Problem: 4^7 → Type: **4** y^x **7** **=** → Answer: **16,384**

Problem: 10^2 → Type: **10** y^x **2** **=** → Answer: **100**

Problem: 10^3 → Type: **10** y^x **3** **=** → Answer: **1,000**

Problem: 10^4 → Type: **10** y^x **4** **=** → Answer: **10,000**

Problem: 10^5 → Type: **10** y^x **5** **=** → Answer: **100,000**

Problem: 10^6 → Type: **10** y^x **6** **=** → Answer: **1,000,000**

Powers of Ten

- The place value system is based off of the powers of ten
- The number of the exponent tells how many zeros are on the number

Zero Power

- Any number to the zero power equals one

SOL 6.5 – Squares and Perfect Squares

Exponential Form	Word Form	Expanded Form	Standard From
1^2	1 squared	1×1	**1**
2^2	2 squared	2×2	**4**
3^2	3 squared	3×3	**9**
4^2	4 squared	4×4	**16**
5^2	5 squared	5×5	**25**
6^2	6 squared	6×6	**36**
7^2	7 squared	7×7	**49**
8^2	8 squared	8×8	**64**
9^2	9 squared	9×9	**81**
10^2	10 squared	10×10	**100**
11^2	11 squared	11×11	**121**
12^2	12 squared	12×12	**144**
13^2	13 squared	13×13	**169**
14^2	14 squared	14×14	**196**
15^2	15 squared	15×15	**225**
16^2	16 squared	16×16	**256**
17^2	17 squared	17×17	**289**
18^2	18 squared	18×18	**324**
19^2	19 squared	19×19	**361**
20^2	20 squared	20×20	**400**

Perfect Squares – Remember the stackems