EQUATIONS WORKSHEET

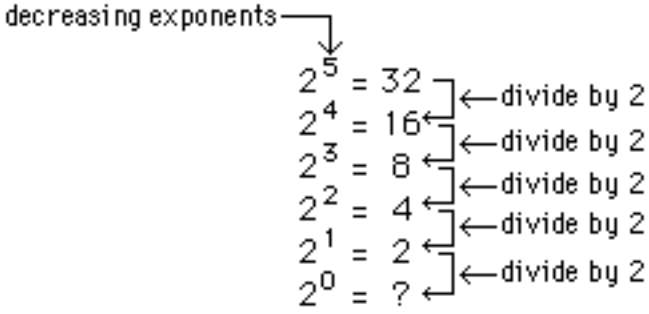
6A

NAME _____

ZERO POWER

PRINCIPLE
x * 0 = 1 for any non-zero value of x. 0 * 0 is undefined.

Consider this sequence of powers.



Based on the pattern of dividing by 2 to get the next smaller power, $2^0 = 1$.

EXAMPLES

1. 7 * 0 = 1 2. (0 - 3) * 0 = 1 3. (5 x 9) * 0 = 1
4. For a Goal of **1**, a Solution can be made of the form ☐ * 0.
   any number except 0
5. A Solution like 9 + 7 can be padded to 9 + 7 x [(☐) * 0] .

EXERCISES

Circle the number of each Solution in Exercises 1-6 that equals a Goal of **40**. If a Solution can be grouped so that it does not equal 40, consider it incorrect and do not circle its number.

1. 8 x 5 x (9 * 0)
2. (6 * 2) + 4 ÷ 8 * 0
3. (9 x 5) - (3 + 2) x (2 + 1) * 0
4. (7 x 6) - 1 - (3 * 0)
5. (7 + 6) x 3 + (0 * 0)
6. (7 * 2) - 9 ÷ (3 x 1) * 0

MORE CHALLENGING EXERCISES

Use all the Resources listed to write a Solution for the given Goal.

	Goal	Resources	Solution
7.	(1-5)*0	+ x ÷ 3 4 5 7	_____
8.	5 ÷ 4	+ x ÷ * 0 2 3 7 8	_____
9.	4 √‾ 9 + 7	+ x * * 0 1 7 8 9	_____
10.	32	- x * * 2 3 3 5 9	_____
11.	3 ÷ 4	+ - ÷ ÷ * 2 5 6 7 8 9	_____
12.	1 * 99	+ - x * * 0 2 2 3 5 6	_____