SECTION-13: Symmetry-Math (SM) Notation for Numbers Raised to Powers

In Broken-Symmetry (BS) math the (-) dash sign used as a superscript does not mean to subtract. This is another poor use of a symbol. This (-) dash sign when used as a superscript means to divide the number into one.

Poor BS Notation of (-) sign	Actual Number	SM Notation
$10^{-1} = 1/10 = 1x10^{-1}$	0.1	1<1
$10^{-2} = 1/100 = 1x10^{-2}$	0.01	1<2
10^{-3} = 1/1000 mm	0.001	1<3
10^{-4} = 1/10000	0.0001	1<4
10^{-5} = 1/100000	0.00001	1<5
10^{-6} = 1/1000000 um	0.000001	1<6
10^{-7} = 1/10000000	0.0000001	1<7
10^{-8} = 1/100000000	0.00000001	1<8
10^{-9} = 1/1000000000 nm	0.000000001	1<9
10^{-10} = 1/10000000000	0.0000000001	1<10
10^{-15} = 1/1000000000000000 fm	0.000000000000001	1<15

0.001 = 1<3 = 10<4 =100<5	$\frac{1}{10^x} = 1 < x$ NEVER 10^{-x}

BS Notation	Actual Number	SM Notation
100	1 (by definition)	
10^1	10	1>1
10^2 = (10)(10)	100	1>2
10^3 = (10)(10)(10)	1000	1>3
10^4	10000	1>4
10^5	100000	1>5
10^6	1000000	1>6
10^9	100000000	1>9
10^{15}	10000000000000	1>15

multiply	(1>m)(1>n) = 1(>m+>n)	(1>4)(1>5) = [1(>4+>5)] = 1>9
Divide	$\frac{1<m}{1<n} = 1(<m-<n)$	$\frac{1<4}{1<5} = \frac{0.0001}{0.00001} = 1(<4-<5) = 1(<4+>5) = 1>1 = 10$ $\frac{1(<5)}{1(<4)} = \frac{0.00001}{0.0001} = 1(<5-<4) = 1(<5+>4) = 1<1 = 0.1$

BS Math's Illogical and Incorrect Numbers Raised to Powers:

$$\left[C^n = \#\right] \qquad \left[C = \sqrt[n]{\#}\right]$$

BS math: In BS math, only a positive number can have an answer if "n" is an even number (2,4,6, etc.)

$\sqrt[2]{D}.....\sqrt[4]{D}.....\sqrt[6]{D}$ (solutions)

All negative numbers have no solutions.

$\sqrt[2]{-D}.....\sqrt[4]{-D}.....\sqrt[6]{-D}$ (no solutions)

SM: In SM, just add a direction and any number gives the correct answer.

$C = \sqrt[n]{D(\rightarrow\leftarrow\uparrow\downarrow\swarrow\nearrow)}$

n = 2 ; D = 16 $\qquad C = \sqrt{16(\rightarrow\leftarrow\uparrow\downarrow\swarrow\nearrow)} = 4(\rightarrow\leftarrow\uparrow\downarrow\swarrow\nearrow)$

n = 3 ; D = 8 $\qquad C = \sqrt[3]{8(\rightarrow\leftarrow\uparrow\downarrow\swarrow\nearrow)} = 2(\rightarrow\leftarrow\uparrow\downarrow\swarrow\nearrow)$

BS Math: In BS math, the following equation has no solutions because any value of "X", negative or positive is a positive number.

$X^2 + 1 = 0$ has no solutions because of the + sign.

$X^2 = -1$

$X = \sqrt{-1}$

$X^2 - 1 = 0$ can be solved.

$X^2 = 1$

$X = \sqrt{1}$

SM:
Because there are NO positives or negatives, these are simple equations.

$$\left[\left[\vec{\#}\right]^2 \;\&\; \left[\vec{1}\right] = 0\right]$$

$$\left[\left[\vec{\#}\right]^2 = \left[\overleftarrow{1}\right]\right]$$

$$\left[\left[\vec{\#}\right] = \sqrt{\overleftarrow{1}} = \left[\overleftarrow{1}\right]\right]$$

$$Check\ answer$$

$$\left[\left[\overleftarrow{1}\right]^2 \;\&\; \left[\vec{1}\right] = 0\right]$$

BS Math:

$C = \sqrt[n]{X}$ If : X = - 4 and: n = 2

$C = \sqrt{-4}$ No solution (2)(2)=4 (-2)(-2)=4

A negative number has no square root answer in BS math.

Had to invent imaginary numbers: $i^2=-1$

$C = \sqrt[n]{X}$ $C = \sqrt[n]{-4} = \sqrt{-1}\sqrt{4} = i\sqrt{4} = i2$

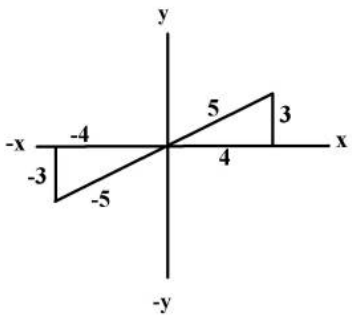
SM: There are no negatives. There are just directions in space. These equations are easily solved without the use of imaginary numbers with SM.

$$\text{If } (X) = \overleftarrow{4}\text{, then } \sqrt{\overleftarrow{4}} = \overleftarrow{2}$$

$$\text{If } (X) = \vec{4}\text{, then } \sqrt{\vec{4}} = \vec{2}$$

Pythagoras theorem: $R^2 = X^2 + Y^2$

In BS math, Pythagoras' theorem provides only the magnitude.
In BS math, Pythagoras' theorem can never have a negative answer or an answer showing a negative direction in space.
For positive direction, the equation provides correct answers.



$R = \sqrt{X^2 + Y^2}$
$R = \sqrt{4^2 + 3^2}$
$R = \sqrt{16 + 9}$
$R = \sqrt{25}$
$R = 5$

$R = \sqrt{X^2 + Y^2}$
$5 = \sqrt{4^2 + 3^2}$
$5 = \sqrt{4^2 + 3^2}$
$5 = \sqrt{16 + 9}$
$5 = \sqrt{25}$
$5 = 5$

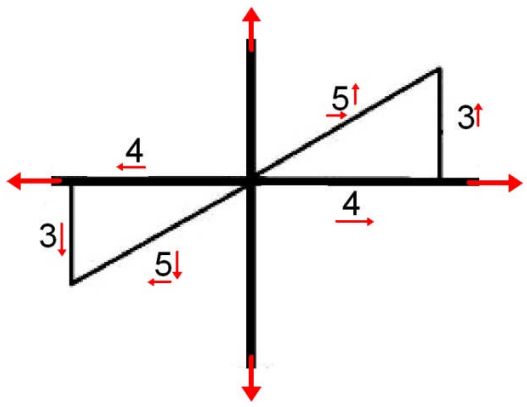
For the negative direction, we know the answer is (-5), we insert (-5) for the (a) to check the answer. BS math cannot provide a negative answer. The (–5) second equation is not true. (-5) does not equal (+5).

$R^2 = X^2 + Y^2$
$R = \sqrt{(-X)^2 + (-Y)^2}$
$R = \sqrt{(-4)^2 + (-3)^2}$
$R = \sqrt{16 + 9}$
$R = \sqrt{25}$
$R = 5$

$R = \sqrt{(-X)^2 + (-Y)^2}$
$-5 = \sqrt{(-X)^2 + (-Y)^2}$
$-5 = \sqrt{(-4)^2 + (-3)^2}$
$-5 = \sqrt{16 + 9}$
$-5 = \sqrt{25}$
$-5 = 5$

With SM, Pythagoras' theorem provides magnitude and direction.

$(\uparrow\rightarrow)^2 = \uparrow^2 \,\&\, \rightarrow^2$ and $(\downarrow\leftarrow)^2 = \downarrow^2 \,\&\, \leftarrow^2$



$(\uparrow\rightarrow)^2 = \uparrow^2 \,\&\, \rightarrow^2$
$(\underset{\rightarrow}{5}^{\uparrow}) = \sqrt{\underset{\rightarrow}{4}^2 + 3^{\uparrow 2}}$
$(\underset{\rightarrow}{5}^{\uparrow}) = \sqrt{16 + 9^{\uparrow}}$
$(\underset{\rightarrow}{5}^{\uparrow}) = \sqrt{25^{\uparrow}}$
$(\underset{\rightarrow}{5}^{\uparrow}) = (\underset{\rightarrow}{5}^{\uparrow})$

$(\underset{\leftarrow}{5}_{\downarrow}) = \sqrt{4_{\downarrow}^{\,2} + \underset{\leftarrow}{3}^2}$
$(\underset{\leftarrow}{5}_{\downarrow}) = \sqrt{16_{\downarrow} + \underset{\leftarrow}{9}}$
$(\underset{\leftarrow}{5}_{\downarrow}) = \sqrt{\underset{\leftarrow}{25}_{\downarrow}}$
$(\underset{\leftarrow}{5}_{\downarrow}) = (\underset{\leftarrow}{5}_{\downarrow})$