

Answer on Question #47790 – Math - Algebra

Why is positive and negative is always negative?

And negative negative is positive?

Solution.

The convention $(-1) * (-1) = 1$ has been adopted for the simple reason that any other convention would cause something to break.

For example, if we adopted the convention that $(-1)(-1) = -1$, the distributive property of multiplication wouldn't work for negative numbers:

$$(-1) * (-1 + 1) = (-1) * (-1) + (-1) * 1 = -1 - 1 = -2$$

So, we have: $-2 = 0$.

The same thing is with convention $(-1) * 1 = -1$.

If we adopted the convention that $(-1) * 1 = 1$, the distributive property of multiplication wouldn't work for negative numbers:

$$(-1) * (-1 + 1) = (-1) * (-1) + (-1) * 1 = 1 + 1 = 2$$

So, we have: $2 = 0$.