



Research Paper

## Real Life Applications of Counting Numbers

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We are working on counting numbers in our day to day lives in the same manner which I am going to actually draw everyone's kind attention through the following real life examples using counting numbers. We use the same properties in dealing with things exchanged in all sorts of transactions but we do not introduce counting numbers to the children in this manner.

Counting numbers are used to count things and all things are not identical in their values , for examples one Dollar is not equal to one Pound in exchange similarly, one gram of silver is not equal to one gram of Gold in value but in both the cases the count is one.

so, we cannot use very fundamental properties here to add, subtract , multiply or divide the two different units of things whose one unit count on different scales of measurements have different market values.

Now, if we apply the following rules of simple mathematics :

$$1 - 1 = 0$$

$$1 + 1 = 2$$

$$1 \times 1 = 1$$

$$1 \div 1 = 1$$

The whole idea of business transactions will collapse and the books of accounts will not be maintained in the way we are maintaining them.

The reality is that, in terms of values of two different things having same count, during the transaction or comparison yield entirely different results which we use basically while dealing with them.

so, we should start the following concept to the school children from beginning so that their critical thinking can be developed.

$$1 - 1 \text{ may not be } 0$$

$$1 + 1 \text{ may not be } 2$$

$$1 \times 1 \text{ may not be } 1$$

$$1 \div 1 \text{ may not be } 1$$

Let's understand this further:

10 cm + 12 cm = undoubtedly 22 cm but 10 steps + 12 steps may not be 22 steps unless steps are of equal length.

To answer this, all steps must be identical or if not, we need to calculate the total of 22 unidentical steps in terms of one particular step.

Counting Numbers are used for counting different units of things and but weteach the following properties as:

$$1 - 1 = 0$$

$$1 \div 1 = 1$$

Which are wrong because:

$1 - 1$  can be greater than 0 or smaller than 0 or equal to 0.

If first one denotes 1 dollar and second one is one Rupee then  $1 - 1$  is greater than 0.

On the other hand if first 1 is a rupee and second 1 is a dollar then  $1 - 1$  is less than 0.

$1 - 1 = 0$  only when first and second ones denote same identical units i.e. either both are Rupees or both are Dollars.

Same way,

$1 \div 1$  is greater than 1, if first 1 unit which is in numerator is bigger than 1 unit placed in denominator.

$1 \div 1$  is smaller than 1 in the reverse case.

$1 \div 1 = 1$ , only when both units are identical.

This critical thinking would allow children to think beyond boundaries of the wrongly presented properties from beginning. If the same properties are taught then they should be under the headings 'FOR IDENTICAL THINGS'.

The theory applies on adding or multiplying two or more dissimilar units, the result is different when we need it in terms of a particular unit.

For example '

$1 + 1$  may not be 2 it may be lesser than 2 (when desired answer is in terms of smaller unit) or greater than 2 (when desired answer is in terms of greater unit).

$\$ 1 + \text{Re } 1 =$  greater than Rs 2 and less than \$ 2

Similarly:

$\$ 1 \times \text{Re } 1 =$  greater than Rs 1 or less than \$ 1.

On Cartesian plane, we mention length of one unit on axes but we don't state the same when numbers undergo under operations.

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