

Re: This calculation is just wrong / computer can't count!

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"Joseph M. Newcomer" <newcomer@xxxxxxxxxxxx> wrote in message <news:iofsg3dl0v05vfk7pg5dh8k07u42ivhqs@xxxxxxxxxx>

Here is your original message

I have been debugging something for ages now. I have a method that does some complex maths, but right at the beginning it works out a proportion and a few ratios and the maths is simply wrong. In my code I (obviously) use variables and the values vary each time the method is called, but there seems to be a problem with the maths. I have narrowed the problem down to the following. Can someone else please try this simple calculation and see what their computer gets.

Code Line 1:
`double effortChangeProportion = (55.0 - 30.0) / 30.0;`

This first line does 55-30 and divides the result by 30. In other words 25/30, which is 0.8333 (recurring 3s).

The computer manages to give the answer 0.8333333333333337 !!

Code Line 2:
`effortChangeProportion++;`

or

`effortChangeProportion = effortChangeProportion + 1.0;`

The second line of code (both alternatives give the same result) builds on the first by simply adding 1 (so I can then multiply other numbers by this proportion).

In this case 0.8333 becomes 1.8333, but again the computer gets this wrong.

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It tries to add 1 to 0.8333333333333337 and gets 1.833333333333335.

Obviously this can easily be done in 1 line of code, but it is broken down to demonstrate the maths going wrong twice!

Can anyone shed some light on this for me please?

GT

I see only one question: "Can anyone shed some light on this for me please?"

And light was indeed shed immediately with an explanation of binary to decimal conversion, which we should have spotted ourselves, but had 'one of those moments'! So the thread moved on from the original question very quickly to, "well how can I get around this then and avoid manipulating any answers". This was then also answered, then you jumped in with, "wrong question", "double is perfect" etc etc – nothing to do with the question or thread. If you can't contribute, then butt out.