Magic Maths

Walk to School Week
18th – 25th May 2020

This year on the Tuesday of Walk to School Week, pupils, parents, and teachers everywhere can raise money by wearing their happy shoes (e.g. gorilla feet, or shiny shoes)!

Impress your friends with this maths magic trick that lets you work out their shoe size and age!

Give your friend a piece of paper and a pencil and ask them to do the following calculations without showing you:

1. Write down your age.
2. Multiply it by one-fifth of 100.
3. Add on today's date (e.g. 16 if it's the 16th of the month).
4. Multiply by 20% of 25.
5. Now add on your shoe size (if it's a half size round to the next whole number).
6. Finally subtract 5 times today's date.
7. Show me your final answer!

Now look at their answer. If, for example, somebody shows you 1105, that means there are 11 hundreds. This is their age. The remaining digits 05 (or 5) show their shoe size.

Brainteaser!
Can you explain why this trick works?
Can you show how it works algebraically?