

Investigate: Magic With Algebra

Magician's Instructions to the Audience

Tell the audience to pick a number from 1 to 10, and to write it down so everyone but you (the magician) can see it. Instruct the audience to carry out the following arithmetic steps, making sure that you can't see it:

- a) Take the number and double it.
- b) Add 50.
- c) Triple the result.
- d) Subtract 100.
- e) Divide this value in half.
- f) Write down the final result and show it to you (the magician). Ensure that the audience shows you *only* the final result.

Magician's Secret Steps to Find the Number

Look at the audience's result. Announce the following: "I will now use the magic of algebra to determine your number!" Add a magic word or phrase if you like. Try not to let the audience know that you are doing the following calculations mentally.

- a) Subtract 25 from the number you see.
- b) Divide by 3. The result is the number the audience picked.
- c) Announce the number to the amazement of your audience. Take a bow!