FInd a Persons Phone Number.

Ask a student get out a calculator. This could be done on paper but the numbers are very large and the work required ruins the fun. You may want to have a second student watch so they can check that the numbers are keyed in correctly.

Step 1. Have them input (or write down the first 3 digits (the 3 on the left) of their phone number.
 Do not use the area code. You may give an example like 452-2134 the first 3 are 452.

Step 2. Ask them to multiply that number by 80.

Step 3. Ask them to add 1 to that number.

Step 4. Ask them to multiply that number by 250.

Step 5. Ask them add the last 4 digits of their phone number (the 4 on the left)

Step 6. Ask them add the last 4 digits of their phone number again.

Step 7. Ask them to subtract 250 from that number.

Step 8. Ask them to divide that number by 2.

Example 1: Their phone number is 933-2567

Step 1. 933
Step 2. 933*80 = 74640
Step 3. 74640 + 1 = 74641
Step 4. 74641*250 = 18660250
Step 5. 18660250 + 2567 = 18662817
Step 6. 18662817 +2567 = 18665384
Step 7. 18665384-250 = 18665134
Step 8. 18665134 / 2 = 933-2567

Explanation:
Let x= 1st three digits of phone number and let y= last 4 digits of phone number
Step 1. x
Step 2. $80x$
Step 3. $80x + 1$
Step 4. $250(80x + 1) = 20000x + 250$
Step 5. $20000x + 250 + y$
Step 6. $20000x + 250 + 2y$
Step 7. $20000x + 2y$
Step 8. $(20000x + 2y) / 2 = 10{,}000x + y$

x (which represents your first three digits of your phone number) is multiplied by 10000, which moves it over 4 places and then y is put in the four places on the right.