



## Pro Number Check-Digit Calculation

### Check Digit Calculations

Base number = middle six digits

- Divide base number by 11
- If the remainder is zero, the check-digit is zero
- Subtract the remainder from 11 to produce the check-digit
- Substitute the letter X for the check digit 10

### Examples:

- Pro number: 100-340397-9
  - 340397 divided by 11 = quotient is 30945.18. drop the .18 and then multiply the 30945 by 11 = product is 340395. Subtract that product from the original base number and 2 is the remainder. i.e.  $340397 - 340395 = 2$
  - $11 - 2 =$  check-digit is 9
- Pro number: 828-561881-X
  - 561881 divided by 11 = quotient is 51080.09. Drop the .09 and then multiply the 51080 by 11 = product is 561880. Subtract that product from the original base number and 1 is the remainder. i.e.  $561881 - 561880 = 1$
  - $11 - 1 =$  check-digit is 10
  - Must substitute X for 10
- Pro number: 111-003542-0
  - 003542 divided by 11=quotient is 322 exactly so the remainder is 0
  - Since the remainder is 0, the check-digit is 0
- Excel Example: Enter the 6 digit Pro Base into cell A1 in excel, then in cell B1, copy and paste the following formula and it will equal the check-digit: `=IF(11-MOD(A1,11)=11,0,IF(11-MOD(A1,11)-10,"X",11-MOD(A1,11)))`

999-999999-X

\* \* \*

\* \* Check-digit

\* \* Valid values are

\* \* 0-9 and X

\* \* (calculated &

\* \* appended)

\* \*

Base number is always six digits incrementing by one

#### PRO Prefix

- Always three digits
- Always constant for a particular block of PRO numbers

Click to open: [Check-Digit Instructions and Validation Spreadsheet Tool \(xls\)](#)