

Calculator Program: Residue

This calculator program was written for a TI-83. It is designed to compute the residue of a number in modulus M (or in \mathbb{Z}_M). In other words, if you have n , it will find r such that $n \equiv r \pmod{m}$ where $0 \leq r < m$. (ie: it gives the remainder when you divided n by m .)

How to use:

Run the program.

It will ask, "Modulus?" Enter what mod you are working in.

It will ask, "Number?" Enter the number you want to reduce in mod m .

Program: Residue

```
ClrHome
Disp " "
Input "Modulus?", M
Lbl A
ClrHome
Disp " "
Input "Number?", X
X-M*int(X/M) →R
ClrHome
Disp " "
Disp "Residue =", R
Disp " "
Input "Another Number?", Q
If Q=1
Goto A
ClrHome
```