

Please consider a binary integer register named *ui*, of unspecified length.

Please consider a binary integer register named *base* that can contain either the value 10 or the value 16.

Please consider the following (here suggested, not implemented at this time) commands encoded as if Unicode characters: where *X* and *Y* are each used to represent a herein unspecified hexadecimal character that would need to be suggested in a formal application for encoding of the characters in regular Unicode.

```
U+XY000 ui:=ui*base;
U+XY001 ui:=ui*base + 1;
U+XY002 ui:=ui*base + 2;
U+XY003 ui:=ui*base + 3;
U+XY004 ui:=ui*base + 4;
U+XY005 ui:=ui*base + 5;
U+XY006 ui:=ui*base + 6;
U+XY007 ui:=ui*base + 7;
U+XY008 ui:=ui*base + 8;
U+XY009 ui:=ui*base + 9;
U+XY00A ui:=ui*base + 10;
U+XY00B ui:=ui*base + 11;
U+XY00C ui:=ui*base + 12;
U+XY00D ui:=ui*base + 13;
U+XY00E ui:=ui*base + 14;
U+XY00F ui:=ui*base + 15;

U+XY010 ui:=0;
U+XY011 base:=10;
U+XY012 base:=16;
```

Thus a sequence of the character codes may be used to enter any non-negative integer number into the *ui* register, provided that the register is long enough to contain the number. The first character of the sequence needs to set the value of the base being used, unless the value of the base has been set previously and there is no scope for ambiguity. The sequence needs to set the value of *ui* to 0 before any digits are entered..

TO DO Formal names for the characters may be needed.

Please consider a binary integer register named *ai*, of unspecified length.

Please consider the following commands encoded as if Unicode characters, in the same manner as before.

```
U+XY013 ai:=0;
U+XY014 ai:=ui;
U+XY015 ui:=ai;
U+XY016 ai:=ai + ui;
U+XY017 ai:=ai - ui;
U+XY018 ai:=ai * ui;
U+XY019 ai:=ai / ui;
U+XY01A ai:=ai % ui;
```

Thus a sequence of the character codes may be used to carry out integer arithmetic operations.

Please consider a binary integer array named *mi*, each element of the array being a binary integer of unspecified length.

Please consider a binary integer register named j , of unspecified length.

Please consider the following commands encoded as if Unicode characters, in the same manner as before.

```
U+XY01B j:=ai;  
U+XY01C j:=ui;  
U+XY01D ai:=j;  
U+XY01E ui:=j;
```

```
U+XY01F mi[j]:=ai;  
U+XY020 ui:=mi[j];
```

Please note how storage into memory is from ai and loading from memory is into ui .