

Compute a 3-adic representation for 65 in the positive range

```
> U := 65;
p := 3;
for k from 0 while U <> 0 do
    u[k] := modp(U,p);
    U := iquo(U-u[k],p);
od:
n := k;
```

$U := 65$   
 $p := 3$   
 $n := 4$

```
> seq( u[k], k=0..n-1 );
65 = add( u[k]*^(p)^k, k=0..n-1 );
```

2, 0, 1, 2  
 $65 = 2 + (3)^2 + 2(3)^3$

Using the symmetric range

```
> U := 65;
p := 3;
for k from 0 while U <> 0 do
    u[k] := mods(U,p);
    U := iquo(U-u[k],p);
od:
n := k;
```

$U := 65$   
 $p := 3$   
 $n := 5$

```
> seq( u[k], k=0..n-1 );
65 = add( u[k]*^(p)^k, k=0..n-1 );
```

-1, 1, 1, -1, 1  
 $65 = -1 + (3) + (3)^2 - (3)^3 + (3)^4$