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dat_gen(53)
We are working in F_53
~~~~~
Beginning r = 2
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 52
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 52
-----
~~~~~
Beginning r = 3
Trying to calculate order of  $y - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 312
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 312
-----
~~~~~
Beginning r = 4
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 52
-----
Trying to calculate order of  $y - 1$  modulo  $y + 23$ 
-----
Order found!
order = 26
-----
Trying to calculate order of  $y - 1$  modulo  $y - 23$ 
-----
Order found!
order = 52
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 52
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 23$ 
-----
Order found!
order = 52
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y - 23$ 
-----

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Order found!
order = 26
-----
~~~~~
Beginning r = 5
Trying to calculate order of  $y - 1$  modulo  $y^4 + y^3 + y^2 + y + 1$ 
-----
Order found!
order = 28080
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y^4 + y^3 + y^2 + y + 1$ 
-----
Order found!
order = 28080
-----
6

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dat_gen(59)
We are working in F_59
~~~~~
Beginning r = 2
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 29
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 29
-----
~~~~~
Beginning r = 3
Trying to calculate order of  $y - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 348
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 348
-----
~~~~~
Beginning r = 4
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 29
-----
Trying to calculate order of  $y - 1$  modulo  $y^2 + 1$ 
-----
Order found!
order = 232
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 1$ 

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-----
Order found!
order = 29
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y^2 + 1$ 
-----
Order found!
order = 232
-----
~~~~~
Beginning r = 5
Trying to calculate order of  $y - 1$  modulo  $y^2 + 26y + 1$ 
-----
Order found!
order = 580
-----
Trying to calculate order of  $y - 1$  modulo  $y^2 - 25y + 1$ 
-----
Order found!
order = 580
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y^2 + 26y + 1$ 
-----
Order found!
order = 580
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y^2 - 25y + 1$ 
-----
Order found!
order = 580
-----
6

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dat_gen(61)
We are working in F_61
~~~~~
Beginning r = 2
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 60
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 60
-----
~~~~~
Beginning r = 3
Trying to calculate order of  $y - 1$  modulo  $y - 13$ 
-----
Order found!
order = 15
-----
Trying to calculate order of  $y - 1$  modulo  $y + 14$ 
-----

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Order found!
order = 30
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y - 13$ 
-----
Order found!
order = 30
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y + 14$ 
-----
Order found!
order = 15
-----
~~~~~
Beginning r = 4
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 60
-----
Trying to calculate order of  $y - 1$  modulo  $y - 11$ 
-----
Order found!
order = 60
-----
Trying to calculate order of  $y - 1$  modulo  $y + 11$ 
-----
Order found!
order = 30
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 60
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y - 11$ 
-----
Order found!
order = 30
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 11$ 
-----
Order found!
order = 60
-----
~~~~~
Beginning r = 5
Trying to calculate order of  $y - 1$  modulo  $y - 20$ 
-----
Order found!
order = 30
-----
Trying to calculate order of  $y - 1$  modulo  $y + 3$ 
-----
Order found!
order = 15

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-----
Trying to calculate order of  $y - 1$  modulo  $y + 27$ 
-----
Order found!
order = 20
-----
Trying to calculate order of  $y - 1$  modulo  $y - 9$ 
-----
Order found!
order = 20
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y - 20$ 
-----
Order found!
order = 15
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y + 3$ 
-----
Order found!
order = 30
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y + 27$ 
-----
Order found!
order = 20
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y - 9$ 
-----
Order found!
order = 20
-----
6

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dat_gen(67)
We are working in F_67
~~~~~
Beginning r = 2
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 33
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 33
-----
~~~~~
Beginning r = 3
Trying to calculate order of  $y - 1$  modulo  $y + 30$ 
-----
Order found!
order = 33
-----
Trying to calculate order of  $y - 1$  modulo  $y - 29$ 
-----

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Order found!
order = 66
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y + 30$ 
-----
Order found!
order = 66
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y - 29$ 
-----
Order found!
order = 33
-----
~~~~~
Beginning r = 4
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 33
-----
Trying to calculate order of  $y - 1$  modulo  $y^2 + 1$ 
-----
Order found!
order = 264
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 33
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y^2 + 1$ 
-----
Order found!
order = 264
-----
~~~~~
Beginning r = 5
Trying to calculate order of  $y - 1$  modulo  $y^4 + y^3 + y^2 + y + 1$ 
-----
Order found!
order = 14960
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y^4 + y^3 + y^2 + y + 1$ 
-----
Order found!
order = 14960
-----
~~~~~
Beginning r = 6
Trying to calculate order of  $y - 1$  modulo  $y - 30$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----

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Order found!
order = 33
-----
Trying to calculate order of  $y - 1$  modulo  $y + 29$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y - 1$  modulo  $y + 30$ 
-----
Order found!
order = 33
-----
Trying to calculate order of  $y - 1$  modulo  $y - 29$ 
-----
Order found!
order = 66
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y - 30$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 33
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 29$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 30$ 
-----
Order found!
order = 66
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y - 29$ 
-----
Order found!
order = 33
-----
7

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dat_gen(71)
We are working in F_71
~~~~~
Begining r = 2
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----

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Order found!
order = 70
-----
~~~~~
Beginning r = 3
Trying to calculate order of  $y - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 420
-----
Trying to calculate order of  $y^2 - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 420
-----
~~~~~
Beginning r = 4
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y - 1$  modulo  $y^2 + 1$ 
-----
Order found!
order = 280
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y^2 + 1$ 
-----
Order found!
order = 280
-----
~~~~~
Beginning r = 5
Trying to calculate order of  $y - 1$  modulo  $y - 25$ 
-----
Order found!
order = 35
-----
Trying to calculate order of  $y - 1$  modulo  $y + 14$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y - 1$  modulo  $y - 5$ 
-----
Order found!
order = 35
-----
Trying to calculate order of  $y - 1$  modulo  $y + 17$ 
-----

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Order found!
order = 70
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y - 25$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y + 14$ 
-----
Order found!
order = 35
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y - 5$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y + 17$ 
-----
Order found!
order = 35
-----
~~~~~
Beginning r = 6
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y - 1$  modulo  $y^2 - y + 1$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 420
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 70
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y^2 - y + 1$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y^2 + y + 1$ 
-----
Order found!
order = 420
-----

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dat_gen(73)
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We are working in F_73
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~~~~~
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```
Beginning r = 2
```

```
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
```

```
-----
```

```
Order found!
```

```
order = 18
```

```
-----
```

```
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
```

```
-----
```

```
Order found!
```

```
order = 18
```

```
-----
```

```
~~~~~
```

```
Beginning r = 3
```

```
Trying to calculate order of  $y - 1$  modulo  $y - 8$ 
```

```
-----
```

```
Order found!
```

```
order = 24
```

```
-----
```

```
Trying to calculate order of  $y - 1$  modulo  $y + 9$ 
```

```
-----
```

```
Order found!
```

```
order = 8
```

```
-----
```

```
Trying to calculate order of  $y^2 - 1$  modulo  $y - 8$ 
```

```
-----
```

```
Order found!
```

```
order = 8
```

```
-----
```

```
Trying to calculate order of  $y^2 - 1$  modulo  $y + 9$ 
```

```
-----
```

```
Order found!
```

```
order = 24
```

```
-----
```

```
~~~~~
```

```
Beginning r = 4
```

```
Trying to calculate order of  $y - 1$  modulo  $y - 27$ 
```

```
-----
```

```
Order found!
```

```
order = 72
```

```
-----
```

```
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
```

```
-----
```

```
Order found!
```

```
order = 18
```

```
-----
```

```
Trying to calculate order of  $y - 1$  modulo  $y + 27$ 
```

```
-----
```

```
Order found!
```

```
order = 72
```

```
-----
```

```
Trying to calculate order of  $y^3 - 1$  modulo  $y - 27$ 
```

```

-----
Order found!
order = 72
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 18
-----
Trying to calculate order of  $y^3 - 1$  modulo  $y + 27$ 
-----
Order found!
order = 72
-----
~~~~~
Beginning r = 5
Trying to calculate order of  $y - 1$  modulo  $y^4 + y^3 + y^2 + y + 1$ 
-----
Order found!
order = 53280
-----
Trying to calculate order of  $y^4 - 1$  modulo  $y^4 + y^3 + y^2 + y + 1$ 
-----
Order found!
order = 53280
-----
~~~~~
Beginning r = 6
Trying to calculate order of  $y - 1$  modulo  $y - 8$ 
-----
Order found!
order = 24
-----
Trying to calculate order of  $y - 1$  modulo  $y + 9$ 
-----
Order found!
order = 8
-----
Trying to calculate order of  $y - 1$  modulo  $y + 8$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y - 1$  modulo  $y - 9$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y - 1$  modulo  $y + 1$ 
-----
Order found!
order = 18
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y - 8$ 
-----
Order found!

```

```
order = 8
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 9$ 
-----
Order found!
order = 24
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 8$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y - 9$ 
-----
Order found!
order = 3
-----
Trying to calculate order of  $y^5 - 1$  modulo  $y + 1$ 
-----
Order found!
order = 18
-----
7
```