

range — Generate numerical range

[Syntax](#)
[Also see](#)[Menu](#)[Description](#)[Remarks and examples](#)

Syntax

```
range varname #first #last [#obs]
```

Menu

Data > Create or change data > Other variable-creation commands > Generate numerical range

Description

`range` generates a numerical range, which is useful for evaluating and graphing functions.

Remarks and examples

[stata.com](#)

`range` constructs the variable *varname*, taking on values *#_{first}* to *#_{last}*, inclusive, over *#_{obs}*. If *#_{obs}* is not specified, the number of observations in the current dataset is used.

`range` can be used to produce increasing sequences, such as

```
. range x 0 12.56 100
```

or it can be used to produce decreasing sequences:

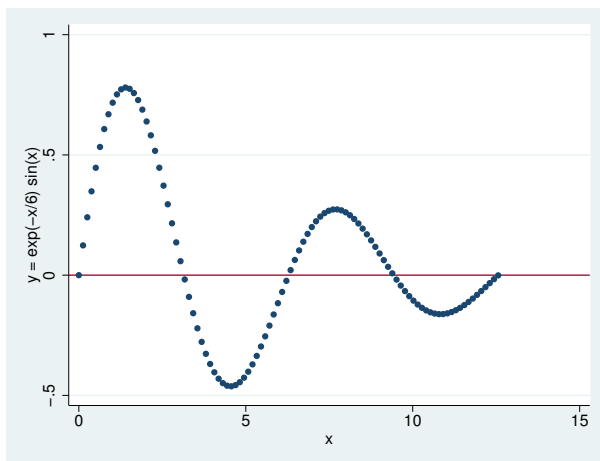
```
. range z 100 1
```

▷ Example 1

To graph $y = e^{-x/6}\sin(x)$ over the interval $[0, 12.56]$, we can type

```
. range x 0 12.56 100
obs was 0, now 100
. generate y = exp(-x/6)*sin(x)
```

```
. scatter y x, yline(0) ytitle(y = exp(-x/6) sin(x))
```

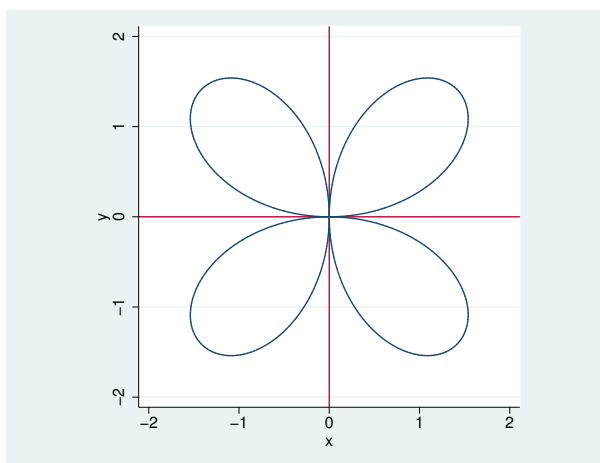


◀

▶ Example 2

Stata is not limited solely to graphing functions—it can draw parameterized curves as well. For instance, consider the curve given by the polar coordinate relation $r = 2 \sin(2\theta)$. The conversion of polar coordinates to parameterized form is $(y, x) = (r \sin \theta, r \cos \theta)$, so we can type

```
. clear
. range theta 0 2*_pi 400
(obs was 100, now 400)
. generate r = 2*sin(2*theta)
. generate y = r*sin(theta)
. generate x = r*cos(theta)
. line y x, yline(0) xline(0) aspectratio(1)
```



◀

Also see

[D] [egen](#) — Extensions to generate

[D] [obs](#) — Increase the number of observations in a dataset