

Intro to Window Settings ClassicView

Objectives:

- Understand what the Standard Window settings mean
- Determine which window setting to change
- See how the axes move when each window setting is changed by itself
- See and understand a common Window-related error screen

Understand what the Standard Window settings mean

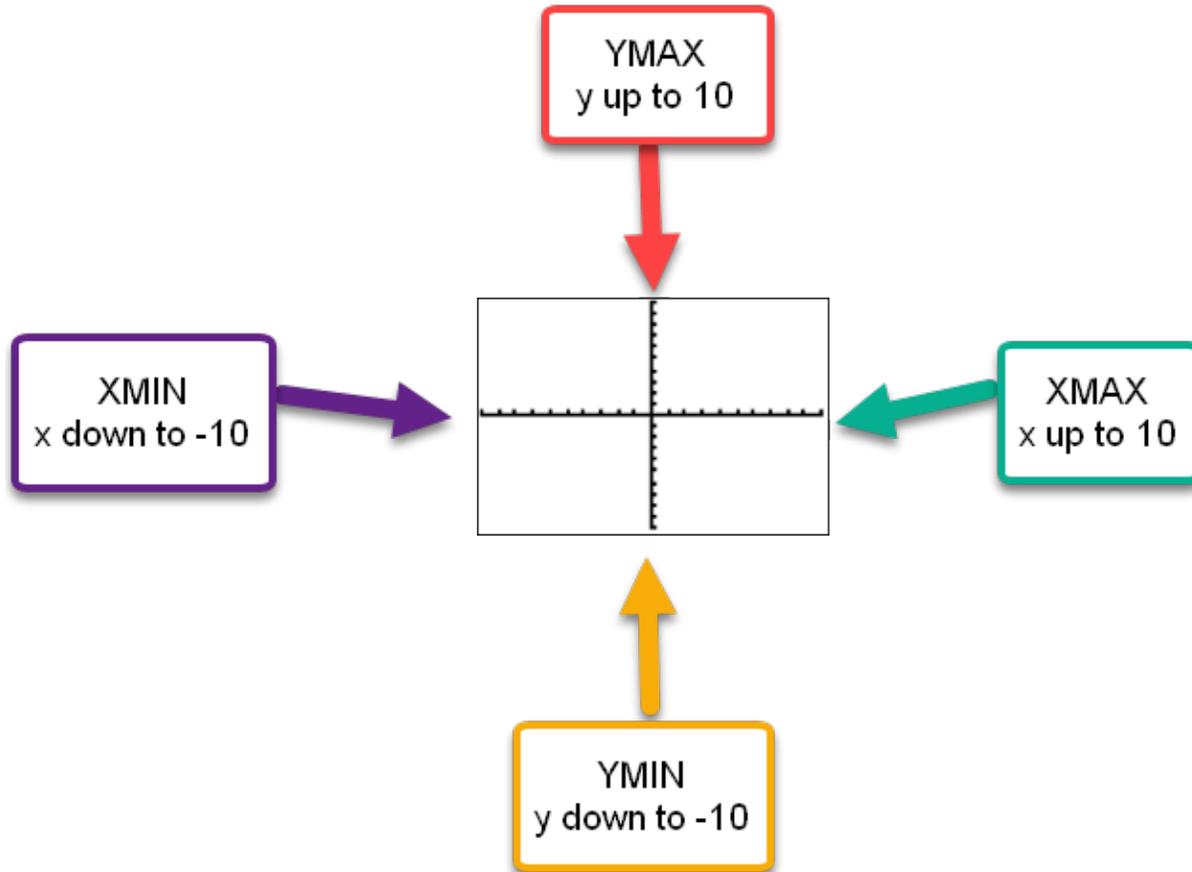
The standard graphing window shows $-10 \leq x \leq 10$ and $-10 \leq y \leq 10$, with tick marks every one unit.

PRO TIP: To set the standard window quickly, press     .

Press   to see the window settings screen:

```
WINDOW
Xmin=-10
Xmax=10
Xscl=1
Ymin=-10
Ymax=10
Yscl=1
Xres=1
```

Here's what the settings for the standard window mean:



XSCL = scale on the x-axis, or the distance between tick marks, is 1 unit

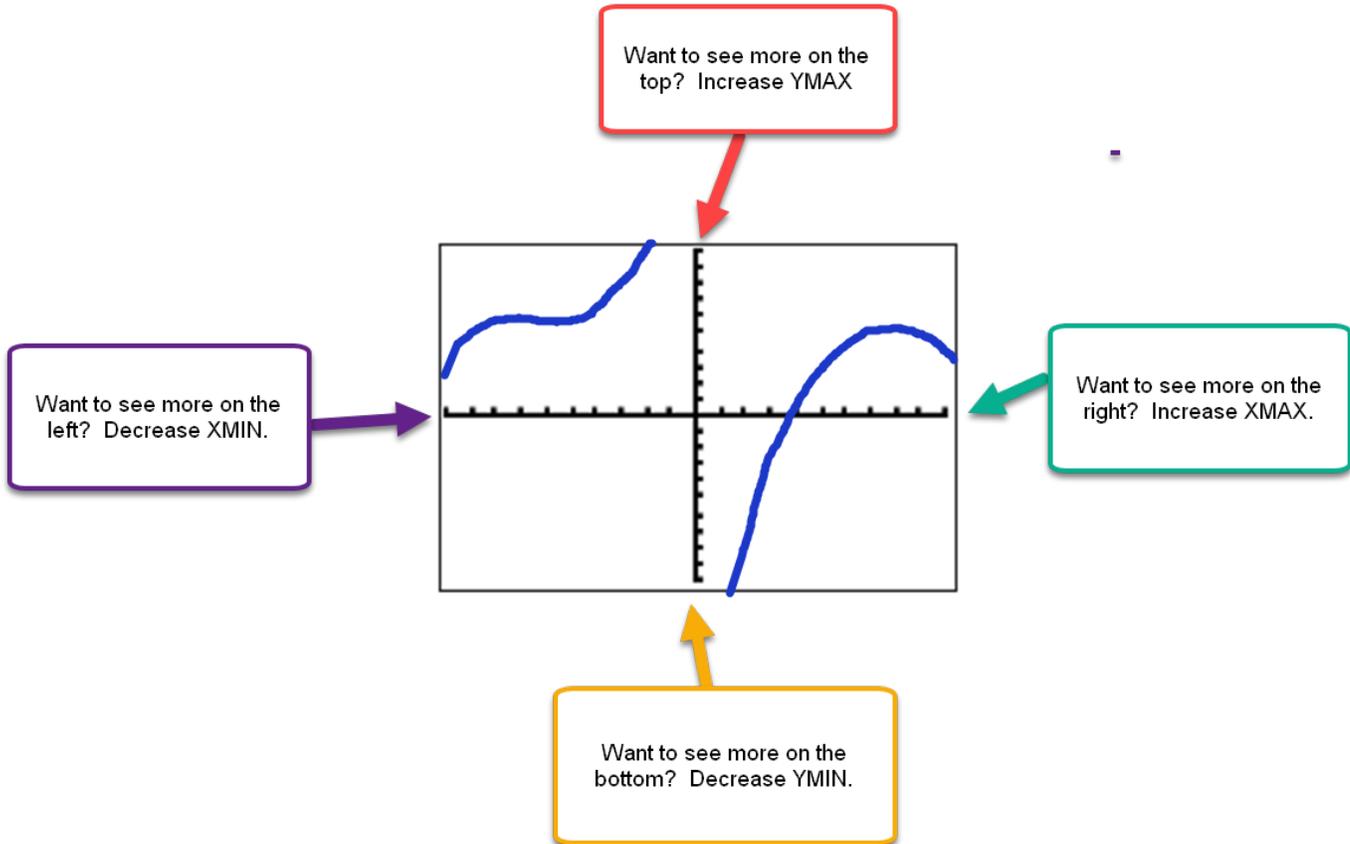
YSCL = scale on the y-axis, or the distance between tick marks, is 1 unit

NOTE: All of these values can be changed, but...

PRO TIP: Don't mess with XRES, which relates to the resolution of the screen.

Determine which window setting to change

It's possible for one, two, three, or all four window dimensions to be inappropriate for the graph.



CAUTION: Decreasing a negative number means making it MORE negative.

Example 1: To Decrease XMIN = -10, try -15 or -20, which are smaller than -10.

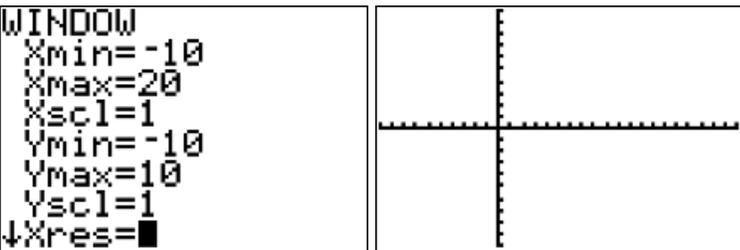
See how the axes move when each window setting is changed by itself

PRO TIP: When changing window settings, imagine the graph you expect before you input numbers.

Example 2: Increase only XMAX (to see more on the right side) and see the y-axis move left.

format f3 L6 V tblset f2 * L2 Z catalog table f5

Press **zoom** **6** then **window** **▼** **2** **0** **graph**

See: 

Example 3: Increase only YMAX (to see more on the top) and see the x-axis move down:

format f3 L6 V tblset f2 * * * * * L2 Z catalog table f5

Press **zoom** **6** then **window** **▼** **▼** **▼** **▼** **2** **0** **graph**

<pre>WINDOW Xmin=-10 Xmax=10 Xscl=1 Ymin=-10 Ymax=20 Yscl=1 ↓Xres=1</pre>	
---	--

See:

Example 4: Decrease only XMIN (to see more on the left side) and see the y-axis move right.

format f3 L6 V tblset f2 ans ? L2 Z catalog ↵ table f5

Press **zoom** **6** then **window** **(-)** **2** **0** **graph**

<pre>WINDOW Xmin=-20 Xmax=10 Xscl=1 Ymin=-10 Ymax=10 Yscl=1 ↓Xres=1</pre>	
---	--

See:

Example 5: Decrease only YMIN (to see more on the bottom) and see the x-axis move up:

format f3 L6 V tblset f2 * ☰ * ☰ * ☰ ans ? L2 Z catalog ↵ table f5

Press **zoom** **6** then **window** **▼** **▼** **▼** **(-)** **2** **0** **graph**

<pre>WINDOW Xmin=-10 Xmax=10 Xscl=1 Ymin=-20 Ymax=10 Yscl=1 ↓Xres=1</pre>	
---	--

See:

See and understand a common Window-related error screen

IMPORTANT: Xmin must be smaller than Xmax and Ymin must be smaller than Ymax.

Example 6: Deliberately set an illegal window to see the error message.

format f3 L6 V tblset f2 L1 Y catalog ↵ table f5

Press **zoom** **6** then **window** **1** **0** **graph**

<pre>WINDOW Xmin=10 Xmax=10 Xscl=1 Ymin=-10 Ymax=10 Yscl=1 Xres=1</pre>	<pre>ERR:WINDOW RANGE Quit</pre>
---	----------------------------------

See: gives this error:

If the left side is $x=10$ and the right side is also $x=10$, there's no space in between to graph!