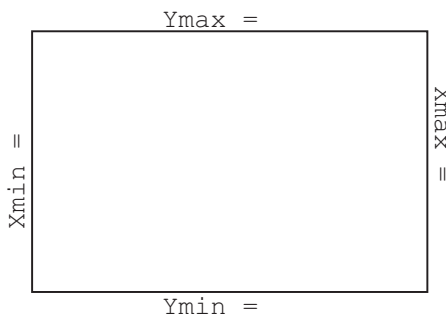


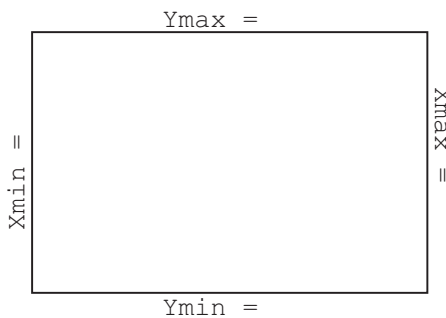
- ☞ $[-10, 10] \times [-4, 12]$ means $X_{\min}=-10$, $X_{\max}=10$, $Y_{\min}=-4$, $Y_{\max}=12$
- ☞ The *complete graph* of a function shows
 - the y -intercept of the graph
 - all the x -intercepts of the graph
 - all the local maximums and local minimums of the graph
 - the end behavior of the graph

1. For each of the following, (i) enter the function into your calculator, (ii) set the window using the designated parameters, and (iii) carefully sketch the result.

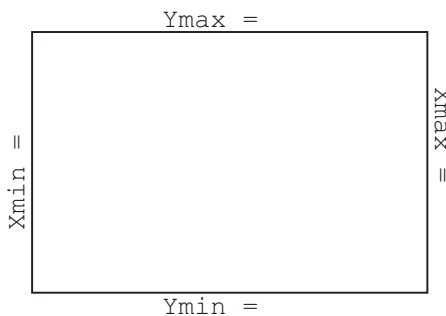
(a) $y = (x - 3)^2 - 2$ $[-10, 10] \times [-10, 10]$ (ZStandard on the ZOOM menu.)



(b) $y = (x - 3)^2 - 2$ $[-4.7, 4.7] \times [-3.1, 3.1]$ (ZDecimal on the ZOOM menu.)



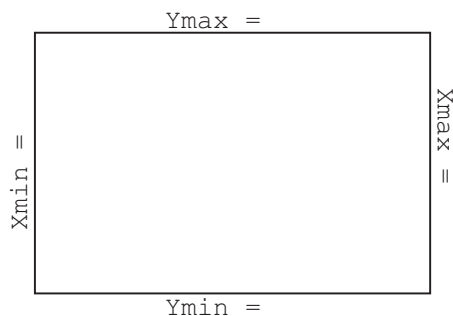
(c) $y = (x - 3)^2 - 2$ $[-1, 7] \times [-3, 11]$



Graphing Calculator I: Setting the Window

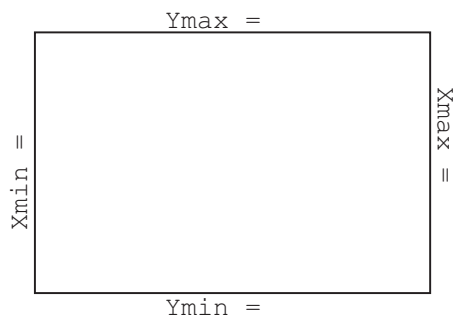
(d) $y = -\frac{1}{10}x^3 + x^2 + \frac{27}{10}x - \frac{18}{5}$

$[-10, 10] \times [-10, 10]$



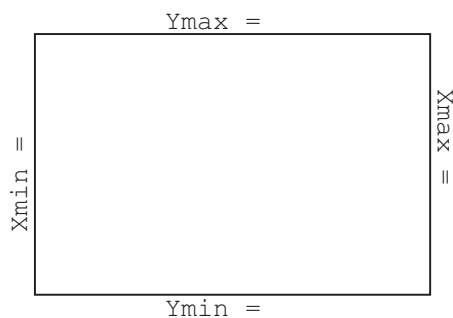
(e) $y = -\frac{1}{10}x^3 + x^2 + \frac{27}{10}x - \frac{18}{5}$

$[-6, 15] \times [-8, 40]$ (Set Yscl=4)



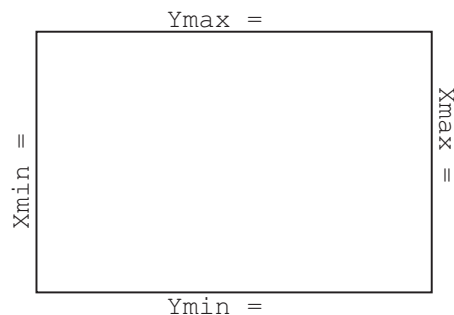
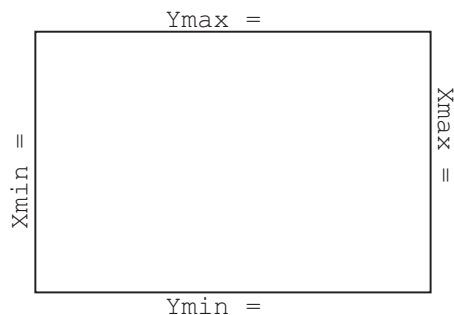
(f) $y = x^5 + 6x^4 - 192x^3 - 866x^2 + 6351x + 7020$

$[-15, 15] \times [-100000, 100000]$



(g) $y = \frac{-5x}{x^2 - 3x - 4}$

Try ZStandard and then $[-9.4, 9.4] \times [-6.2, 6.2]$

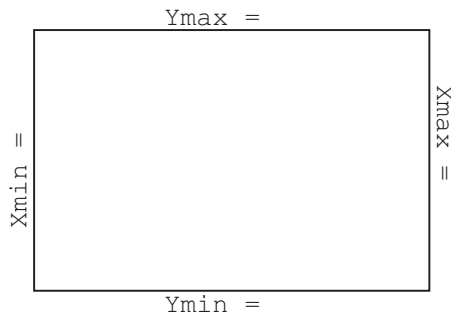


Graphing Calculator I: Setting the Window

2. For each of the following, sketch the *complete* graph of the function. Be sure to indicate the window setting you chose.

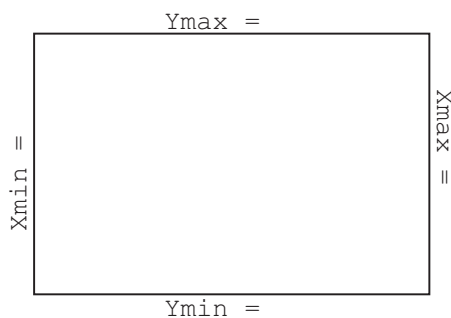
(a) $y = -2x^2 - 19x + 24$

(Hint: There are *two* x -intercepts.)



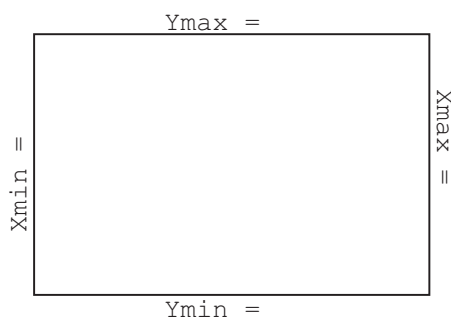
(b) $y = |x^2 + 2x - 35|$.

(Hint: To access the absolute value function on your calculator, $\boxed{\text{MATH}} \rightarrow \text{NUM} \rightarrow \text{abs}(\cdot)$)



(c) $y = (x + 12)(x + 5)(x - 3)(x - 10)$

(Hint: There are *four* x -intercepts and some *really* big numbers.)



Graphing Calculator I: Setting the Window

(d) $y = x^5 + 5x^4 - 5x^3 - 25x^2 + 4x + 20$ (Hint: There are *five* x -intercepts.)

Ymax =

Xmin =

Xmax =

Ymin =

(e) $y = \frac{5}{x-3}$

Ymax =

Xmin =

Xmax =

Ymin =

(f) $y = \frac{2x}{x^2-4}$

Ymax =

Xmin =

Xmax =

Ymin =

(g) $y = \frac{2x}{x^2+4}$

(Hint: Be sure to adjust Ymin and Ymax to get a good view of the graph.)

Ymax =

Xmin =

Xmax =

Ymin =