Screenshots and Solutions Graphing Calculator Worksheet

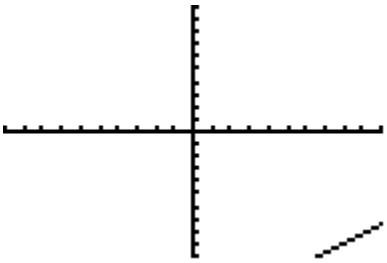
1.) Use your graphing calculator to do the following for $f(x) = \frac{3}{4}x - 15$:

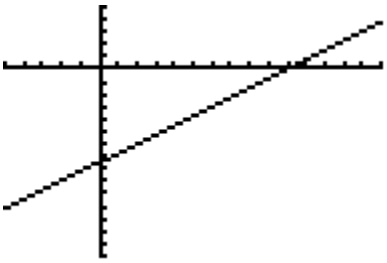
a.) Graph f(x) on your calculator and determine a viewing window that will show both the x-intercept and the y-intercept. [_____, _____, _____] by [_____, _____, _____]
[x-min , x-max , x-scale] by [y-min , y-max , y-scale]

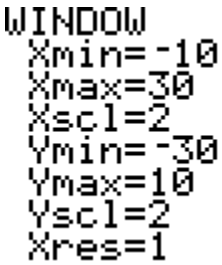
b.) Using your graphing calculator, determine the x-intercept. ____**(20, 0)**_____
(2^{nd} calc, zero, left bound, right bound, guess)

c.) Using your graphing calculator, determine the y-intercept. _____**(0,-15)**_____
(2^{nd} table, look at x = 0 and determine the y-value)

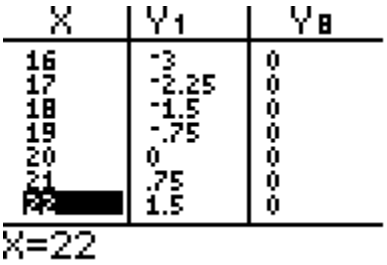
d.) Calculate the value of f(6) using your graphing calculator. _____**(6, -10.5)**_____
(2^{nd} calc, value, x = 6 enter)

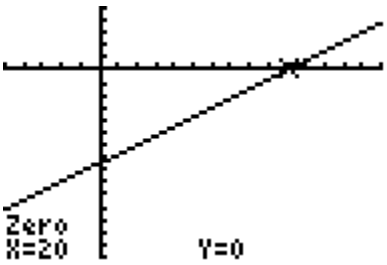


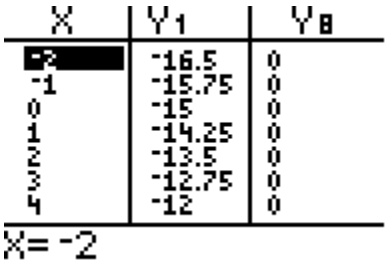




Standard window
We need to see more to right and more down.

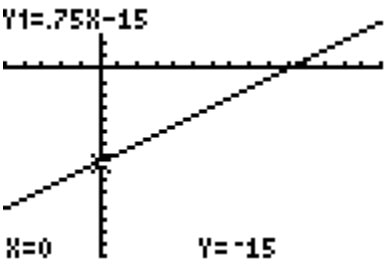


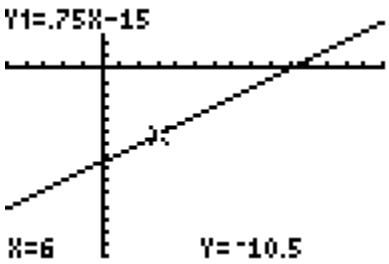




You can see the x intercept from table but not usually the easiest way

y int from table when x=0
can also do with 2^{nd} calc value x=0





2.) Use your graphing calculator to do the following for $f(x) = \sqrt{7 - x} + 18$:

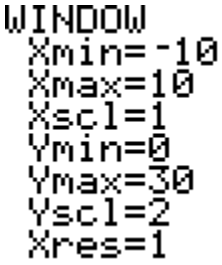
a.) Graph f(x) on your calculator and determine a viewing window that will show both the entire graph.

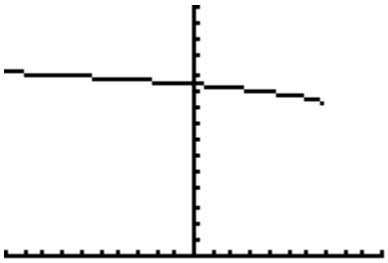
[, ,] by [, ,]

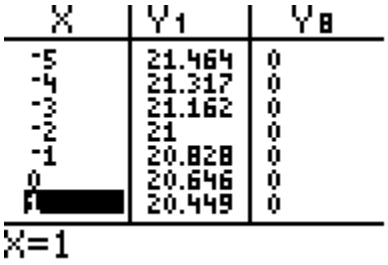
b.) Using your graphing calculator, determine the y-intercept. **(0,20.65)**
Round to two decimal places.
Table or 2nd calc value x=0

c.) Calculate the value of f(2) using your graphing calculator. **(2,20.24)**
Round to two decimal places.
2nd calc value x=2

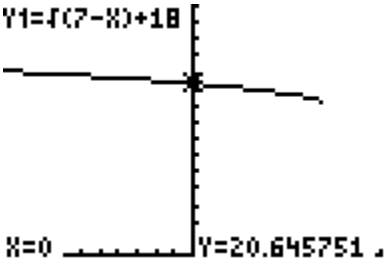
Nothing with a standard window, look at table to see what values you have.
X's you are fine with -10 as min, only goes to x=8, y's are mostly in the 20s

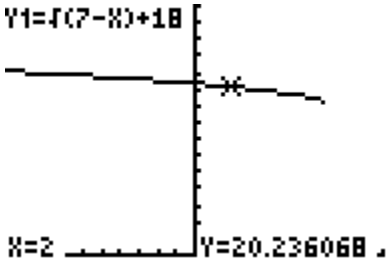






Window I chose





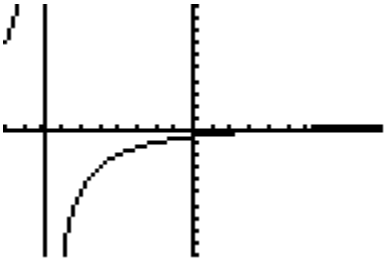
3.) Use your graphing calculator to do the following for $f(x) = \dfrac{x-4}{x+8}$:

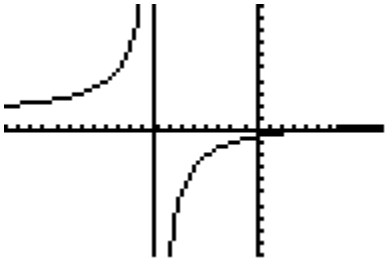
a.) Graph f(x) on your calculator and determine a viewing window that will show the entire graph.
[_____, _____, _____] by [_____, _____, _____]

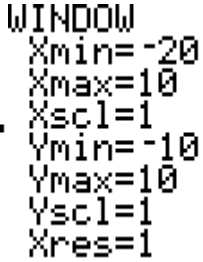
b.) Using your graphing calculator, determine the x-intercept. **____when is y=0?____table or _with 2nd calc and choose zero but not so easy to see where it crosses_____(4,0)_____**

c.) Using your graphing calculator, determine the y-intercept. **_image 5 below from the table or do 2nd calc value x=0_____(0, -.5)_____**

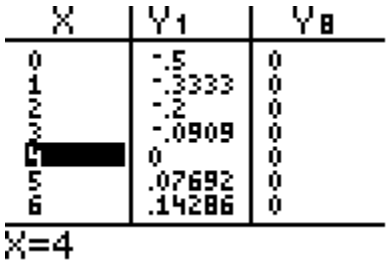
d.) Calculate the value of f(-8) using your graphing calculator. **___screenshot 6 below using 2nd calc value x= -8_____nothing happens_____**
Why are we not getting a number on the calculator? **Function is undefined at x=-8**

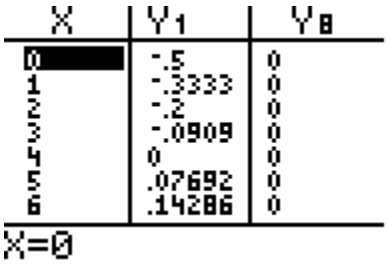


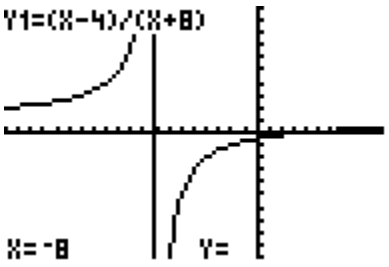




with a standard window.
You need to see more to the left. I will make the x min -20.







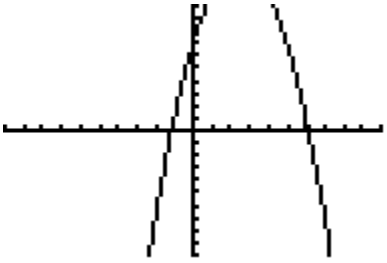
4.) Use your graphing calculator to do the following for $f(x) = -x^2 + 5x + 7$:

a.) Graph f(x) on your calculator and determine a viewing window that will show the entire graph.
[_____, _____, _____] by [_____, _____, _____]

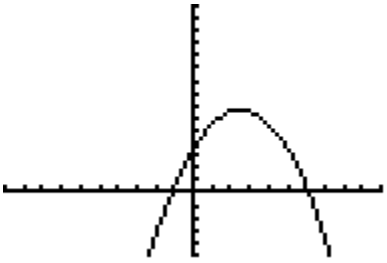
b.) Using your graphing calculator, determine the x-intercepts. **___not seeing on my table y=0 you can look at table increments under tbl set I changed to .25 and still difficult so do 2nd calc zeros____ (-1.14,0)__and (6.14,0)_____**
(Round to two decimal places.)

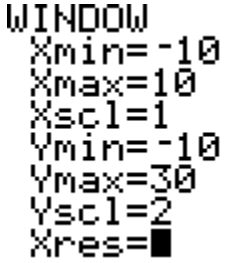
c.) Using your graphing calculator, determine the y-intercept. **___x=0 table not easy increments again..(actually it was my initial value this time) use 2nd calc value x=0 _____**

d.) Calculate the maximum point using your graphing calculator.
____(2.5,13.25)_____
(2nd calc, maximum, left bound, right bound, guess) Round to two decimal places.

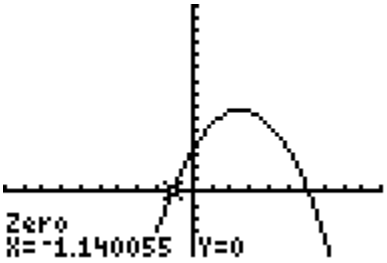


Standard window would like to see more of y

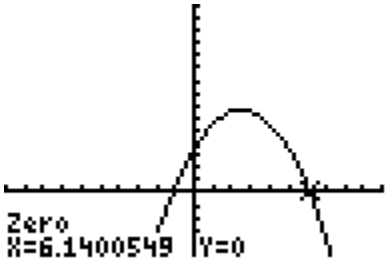




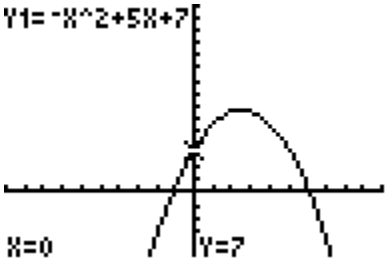
my choice

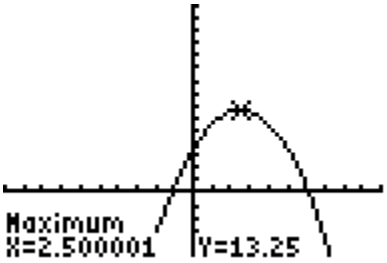


Lft bound, rt bound, guess



Lft bound, rt bound, guess





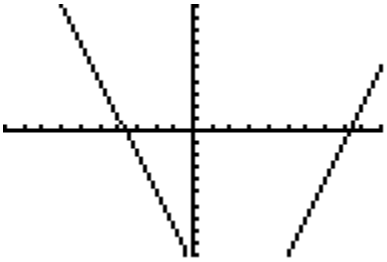
5.) Use your graphing calculator to do the following for $f(x) = |3x - 7| - 18$:

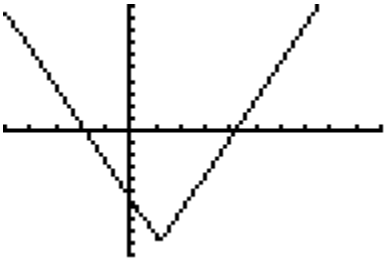
a.) Graph f(x) on your calculator and determine a viewing window that will show the entire graph.
[_____, _____, _____] by [_____, _____, _____]

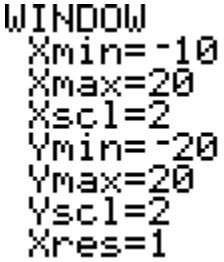
b.) Using your graphing calculator, determine the x-intercepts. **___y=0 my table not showing but you can find by doing 2nd calc and finding zeros__(-3.67,0) and (8.33,0)_____**
(Round to two decimal places.)

c.) Using your graphing calculator, determine the y-intercept. **____(0,-11)_____**
found by dong 2nd calc, value x=0

d.) Calculate the minimum point using your graphing calculator. **_____(2.33, -18)_____**
(2nd calc, minimum, left bound, right bound, guess) Round to two decimal places.

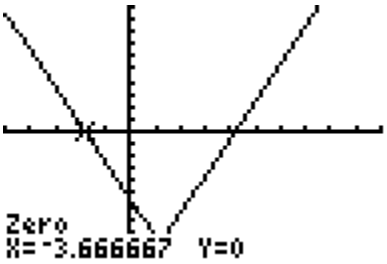


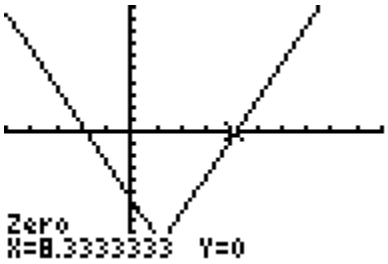


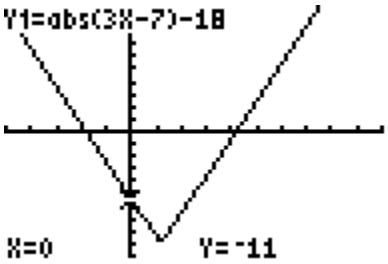


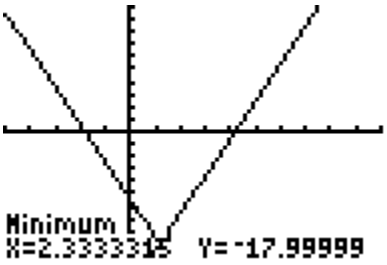
Standard window
Would like to see more to right
and lower

Note: As you are looking at the table for the y values, if it switches from + to − or from − to +, there is a zero in between. This is actually called the Intermediate Value Theorem.









6.) Solve the following equations using either the zero method or the intersect method.

a.) $3x^2 = 12 - 7x$ *b.*) $|5x + 8| - 27 = 0$ *c.*) $\sqrt[4]{x+7} - 2 = 0$ *d.*) $x^3 + 6 = 5x^2$