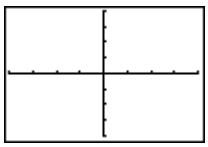
The Greatest Integer Function (y = $\|x\|$)

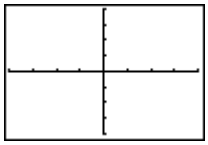
Directions:

i. Before you begin this worksheet, be sure to go into your MODE screen and change from CONNECTED to DOT (Also check for dotted in Y= screen too).
ii. Window min's at –4 and max's at 4.
iii. Window xscl and yscl should both be 1.
iv. In order to graph $\|x\|$ on your calculator, you will need to go to MATH, NUM, int(
v. Be sure to change back to CONNECTED when you are finished working on the project.

1. Graph y = $\|x\|$ on you calculator, sketch the graph here. 1.

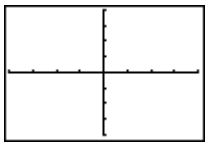


2. Graph y = $\|x\| + 2$ on your calculator, sketch the graph here. 2.



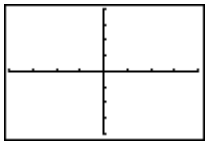
3. How did adding 2 change the y = $\|x\|$ graph? 3. _____

4. Graph y = $\|x - 1\|$ on your calculator, sketch the graph here. 4.



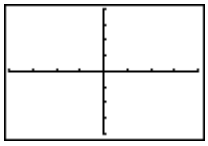
5. How did subtracting 1 from x change the y = $\|x\|$ graph? 5. _____

6. Graph y = $\|2x\|$ on your calculator, sketch the graph here. 6.



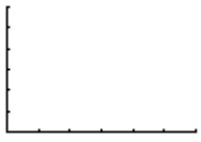
7. How did multiplying x by 2 change the y = $\|x\|$ graph? 7. _____

8. Graph y = $2\|x\|$ on your calculator, sketch the graph here. 8.



9. How did multiplying $\|x\|$ by 2 change the y = $\|x\|$ graph? 9. _____

10. Say you deposit $1000 into a bank that earns a whopping 50% Interest that is compounded yearly. Sketch the graph of your balance over the first 5 years. 10.



11. Sketch a graph of y = $\frac{1}{2}\|2x + 2\| - 1$ on the axis provided. 11.