Name _____ Period _____

WORKSHEET – GREATEST INTEGER FUNCTION

Evaluate:

1. $\|5.28\| =$

2. $\|5\| =$

3. $\|2.99\| =$

4. $\|0\| =$

5. $\|-1.7\| =$

6. $\|.25\| =$

7. $\left\|\frac{10}{3}\right\| =$

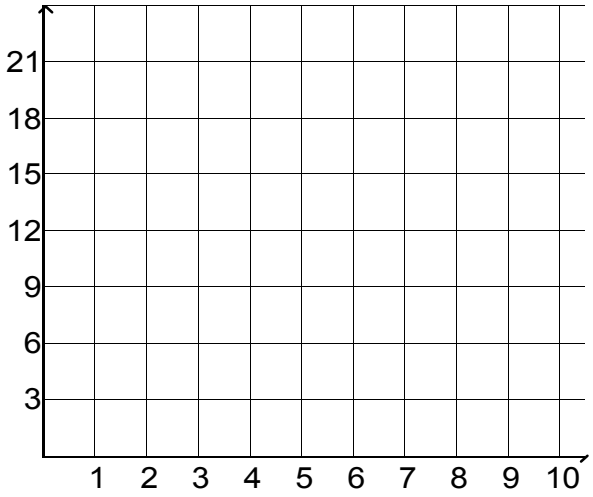
8. $\|-0.5\| =$

9. $\|-2.99\| =$

10. $\|1000\| =$

11. A store will deliver a sofa for $3.00 per mile including fractions of a mile. (For example, 25.5 miles is $3(25) = $75.) There is no charge within the first mile. Use the greatest integer function to express C, the delivery cost, as a function of x, the number of miles from the store. Sketch a graph of this function for $0 \le x \le 5$.

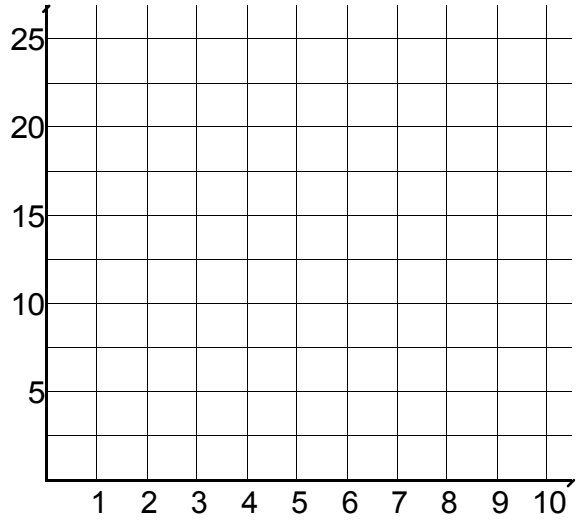
Make a table of values and sketch the graph of the resulting function.



Function: _____

12. The cost of sending an overnight package from College Station to Dallas is $10.00 for a package under one pound and $2.50 is added at one pound and each additional whole pound. Use the greatest integer function to create a model for the cost C of overnight delivery of a package weighing x pounds. Sketch the graph for packages up to 7 pounds.

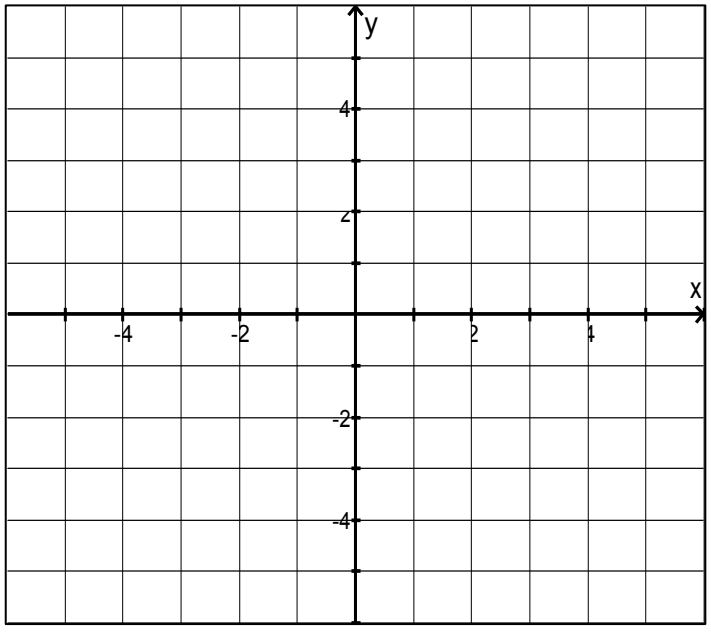
Make a table of values and sketch the graph of the resulting function.



Function: _____

Find the cost of sending a 15 pound 9 ounce package.

13. Graph $f(x)=\|x\|$



a) Domain: _____

b) Range: _____

c) Y-Intercept: _____