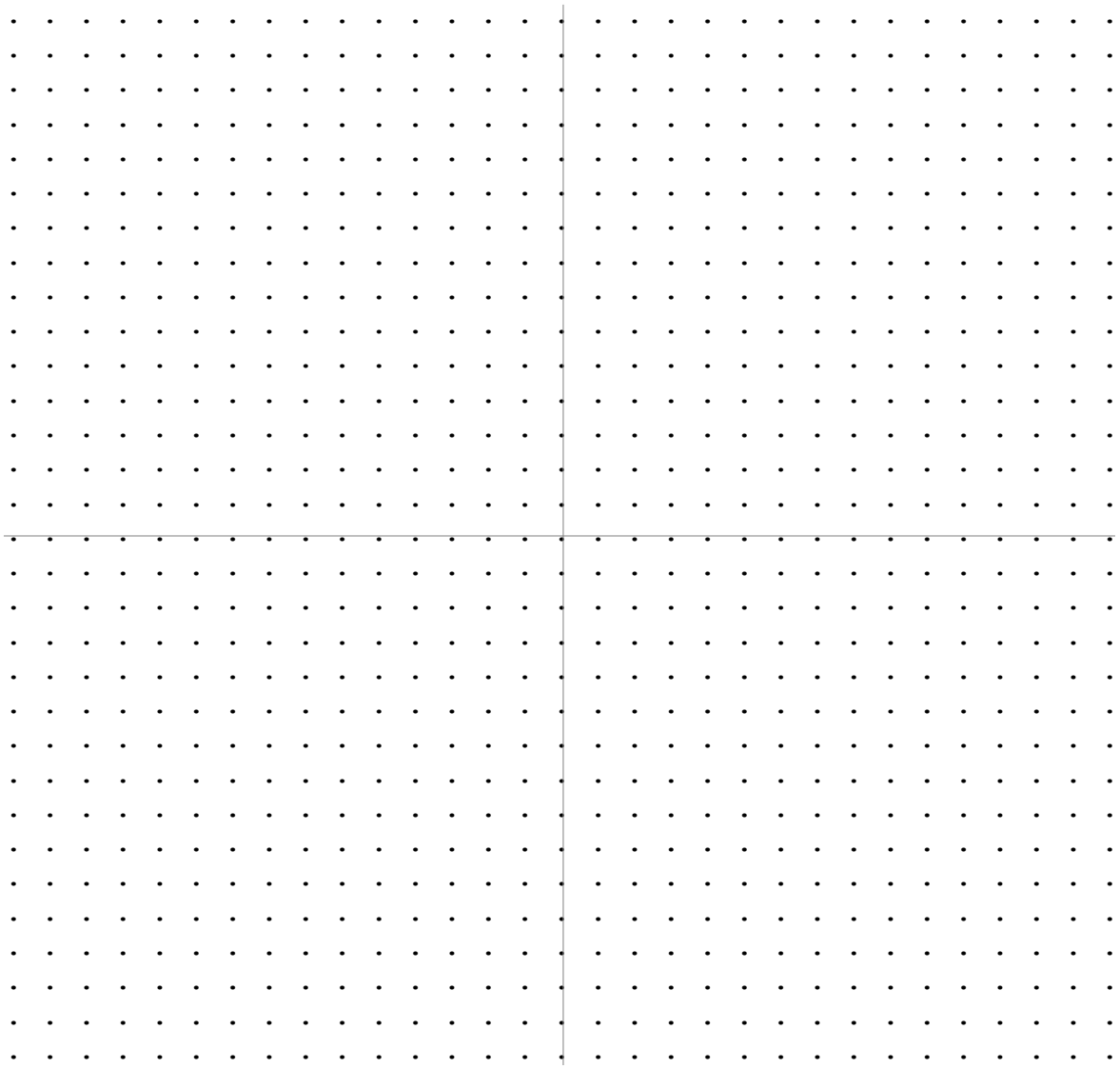
Math 11U Transformation, Domain, Range and Inverses Name:_____

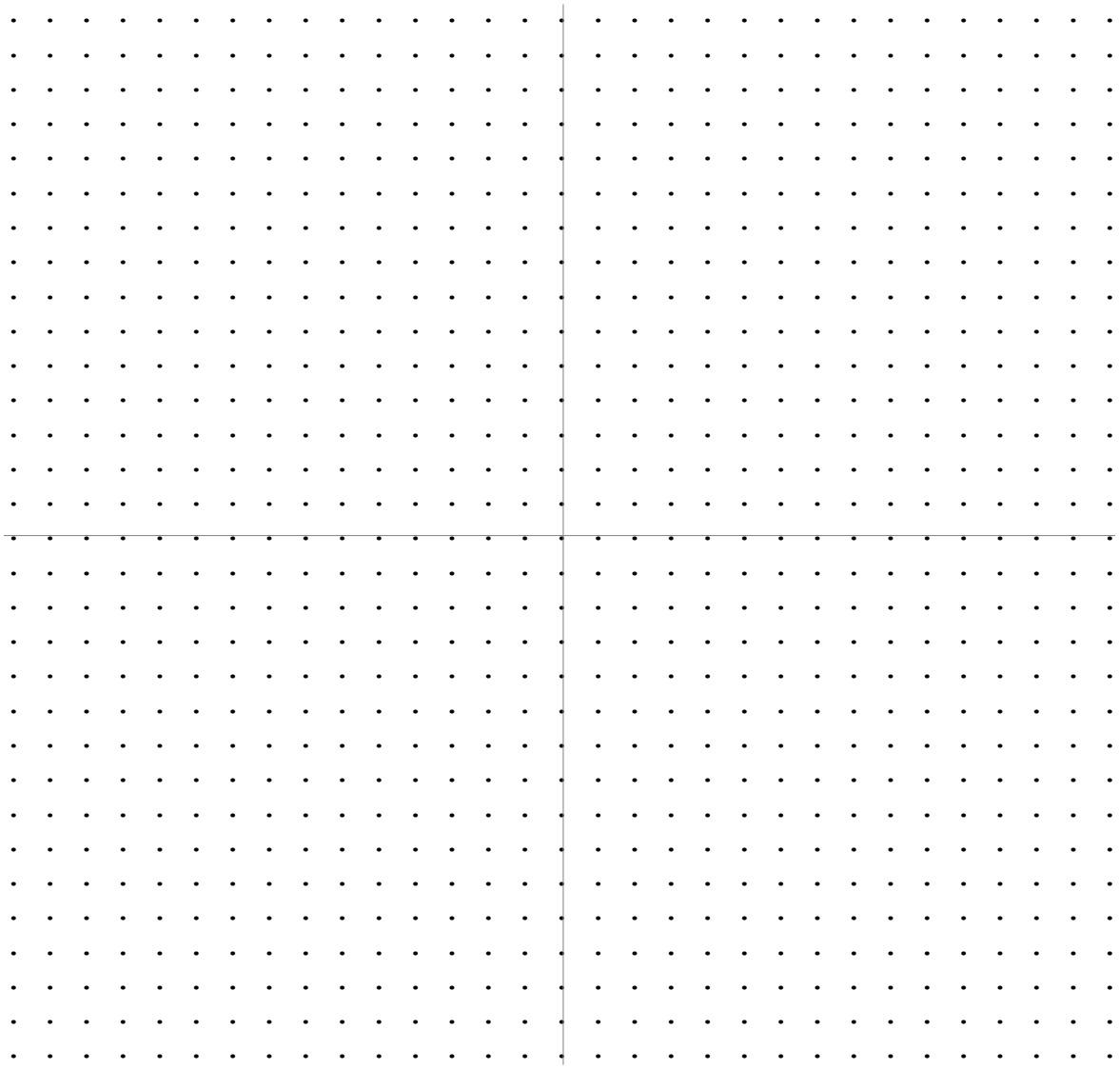
For each function:

- State the Domain and Range
- Graph the function using its transformations. (you do not need to graph the parent function this time)
- Find the Inverse of the function
- State the Domain and Range of the Inverse
- Graph the Inverse using its transformations (some simplification may be required) on the same axis as the original function
- Graph y=x on the same axis as the above. Notice anything?
- Label the graphs so you (and I) know which is the original and which is the inverse.

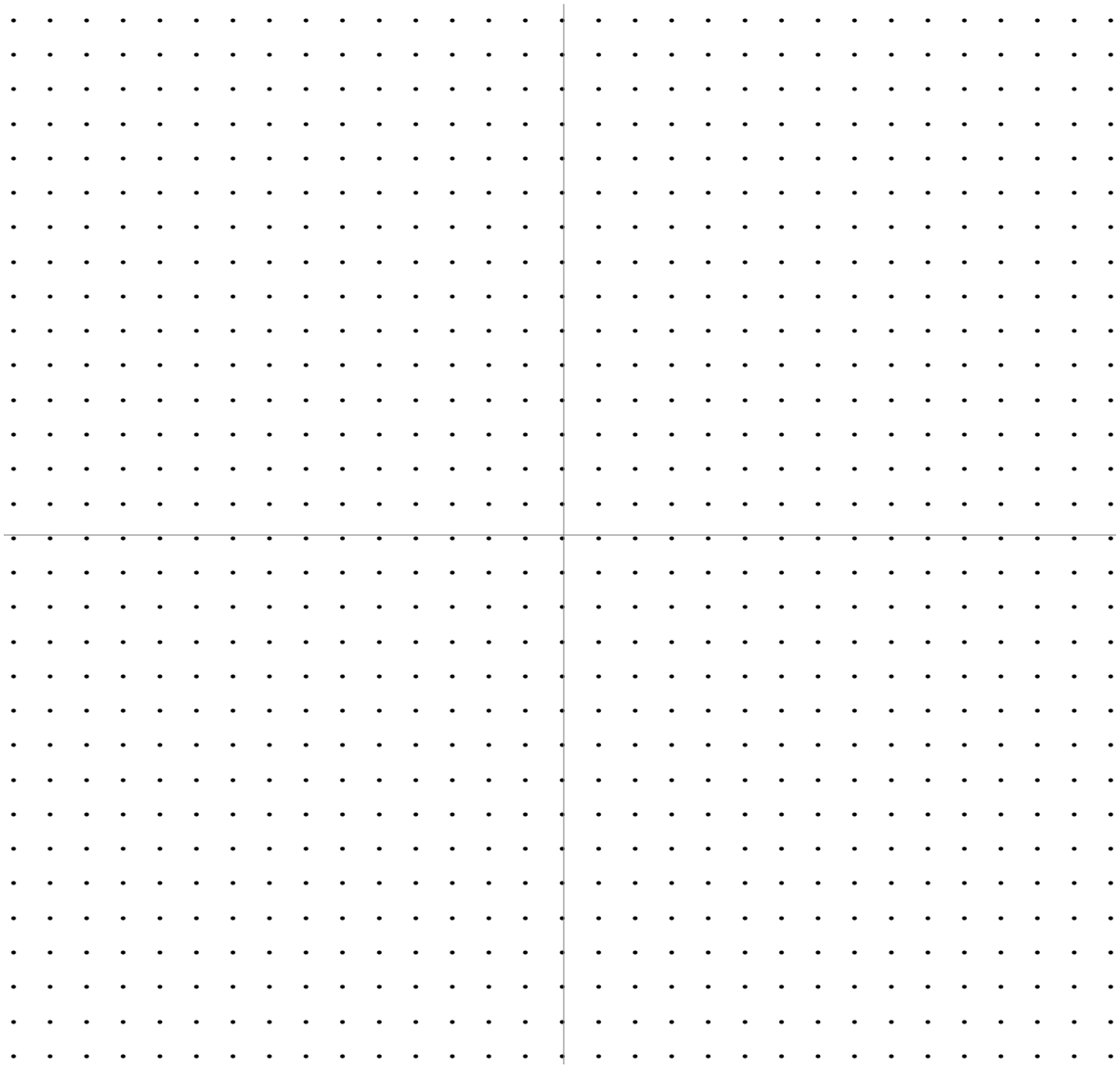
1. $f(x)=-3(x-5)^2+8$



2. $g(x)=\frac{4}{x-7}-5$



3. $h(x)=2\sqrt{\frac{-1}{3}(x-2)}-5$ (note that the square root ends at the bracket).



4. $w(x)=\frac{-1}{2}|3x+15|+7$ Note: Do not state the inverse, but try to graph it.