Math 11U **1.8 Transformations of Functions** **Name:_____**

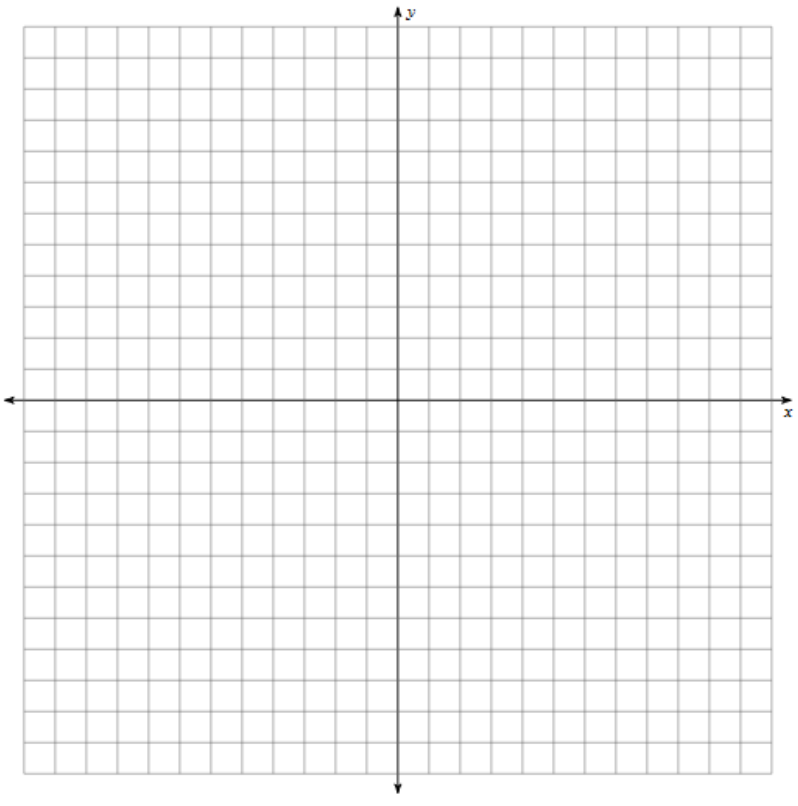
Instructions: For this booklet, fill in all the boxes given the original function. Do any calculations on the following blank page or on a separate piece of paper. When you graph, create a scale that works. All the transformed points do not need to be graphed, but the more the merrier. Let's do an example!

Function	Proper Function $f(x) = a\,f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$f(x) = 2(x-4)^2 - 3$					

Domain		Range		y-int (x=0)	

Table Of Values	Parent Function:		Transformed Function	

Graph both the parent function and the transformed function.

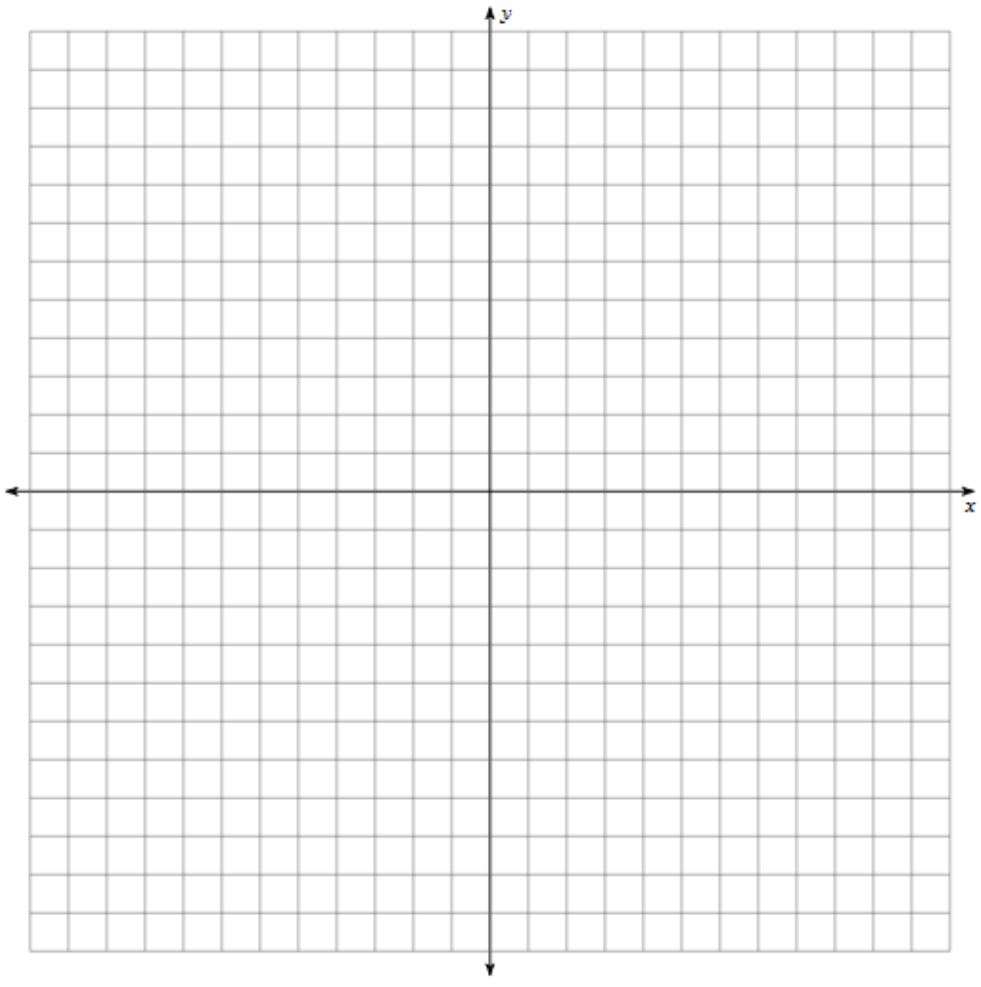


Function	Proper Function $f(x) = a\, f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$g(x) = -3\sqrt{2x+8}+7$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.

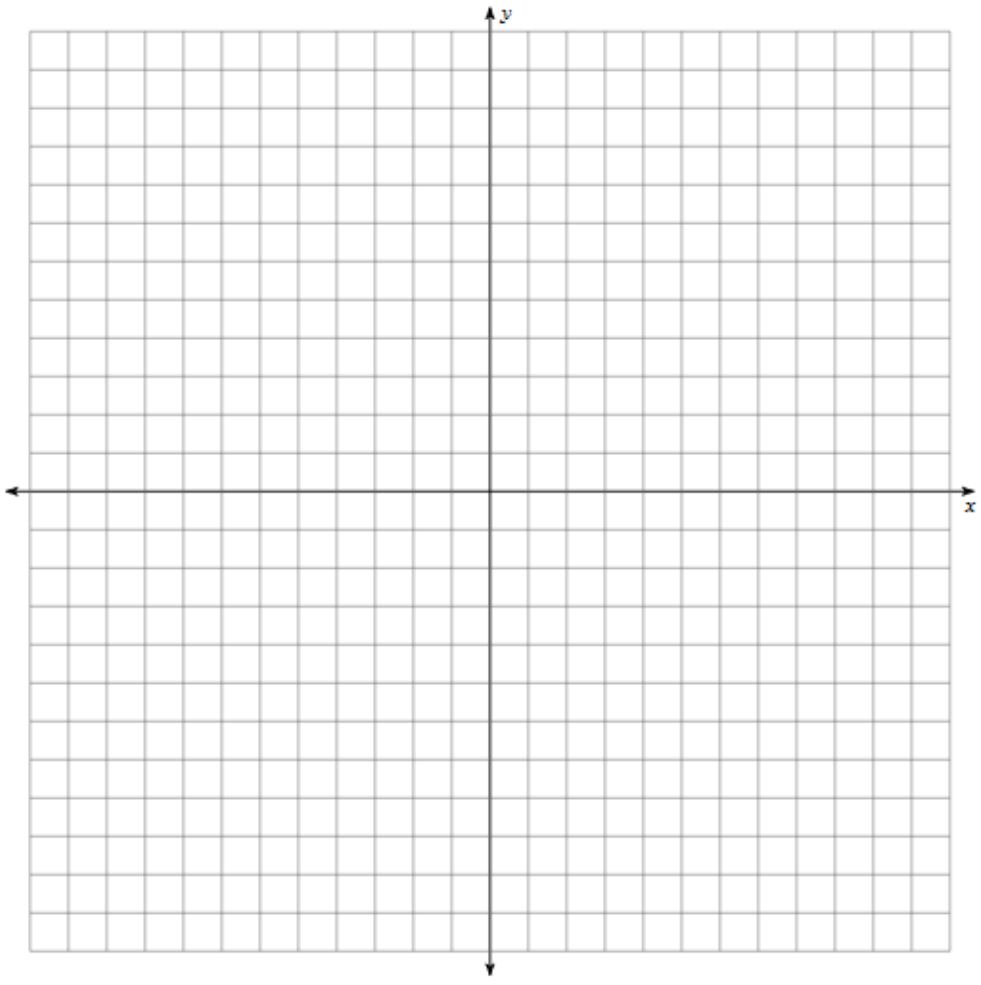


Function	Proper Function $f(x) = a\,f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$h(x) = 5\lvert x+2\rvert - 8$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.

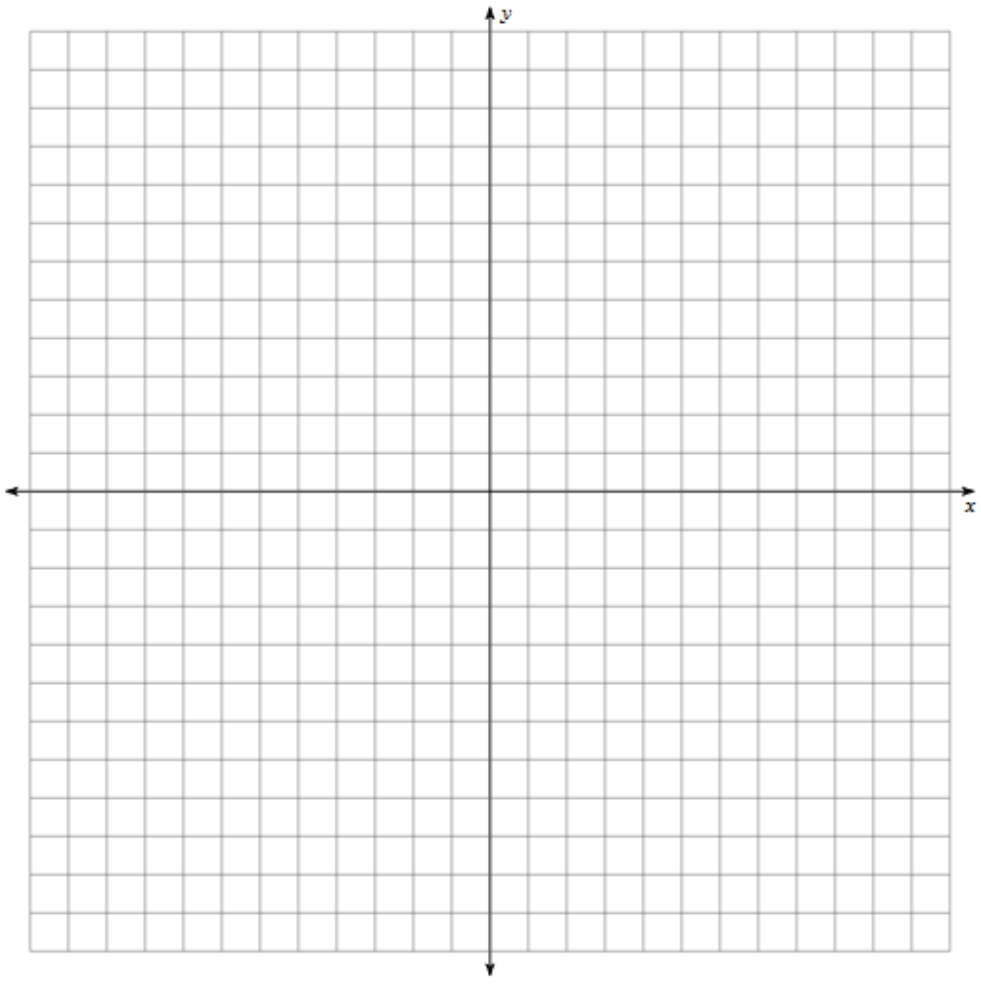


Function	Proper Function $f(x) = a\, f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$k(x)=\dfrac{3}{\frac{1}{2}x-4}+5$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.

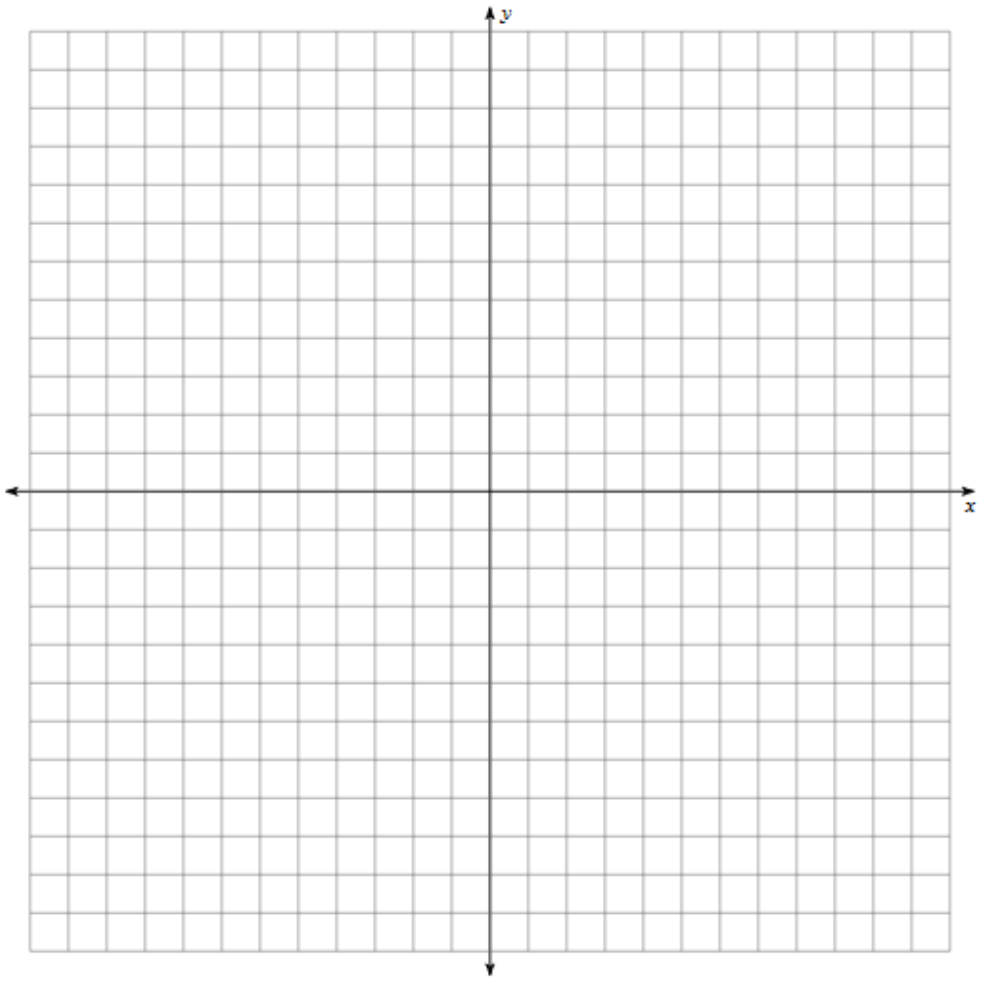


Function	Proper Function $f(x) = a\,f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$m(x) = -4\left(2x+6\right)^2+7$					

Domain		Range		y-int (x=0)	

Table Of Values	Parent Function:		Transformed Function	

Graph both the parent function and the transformed function.

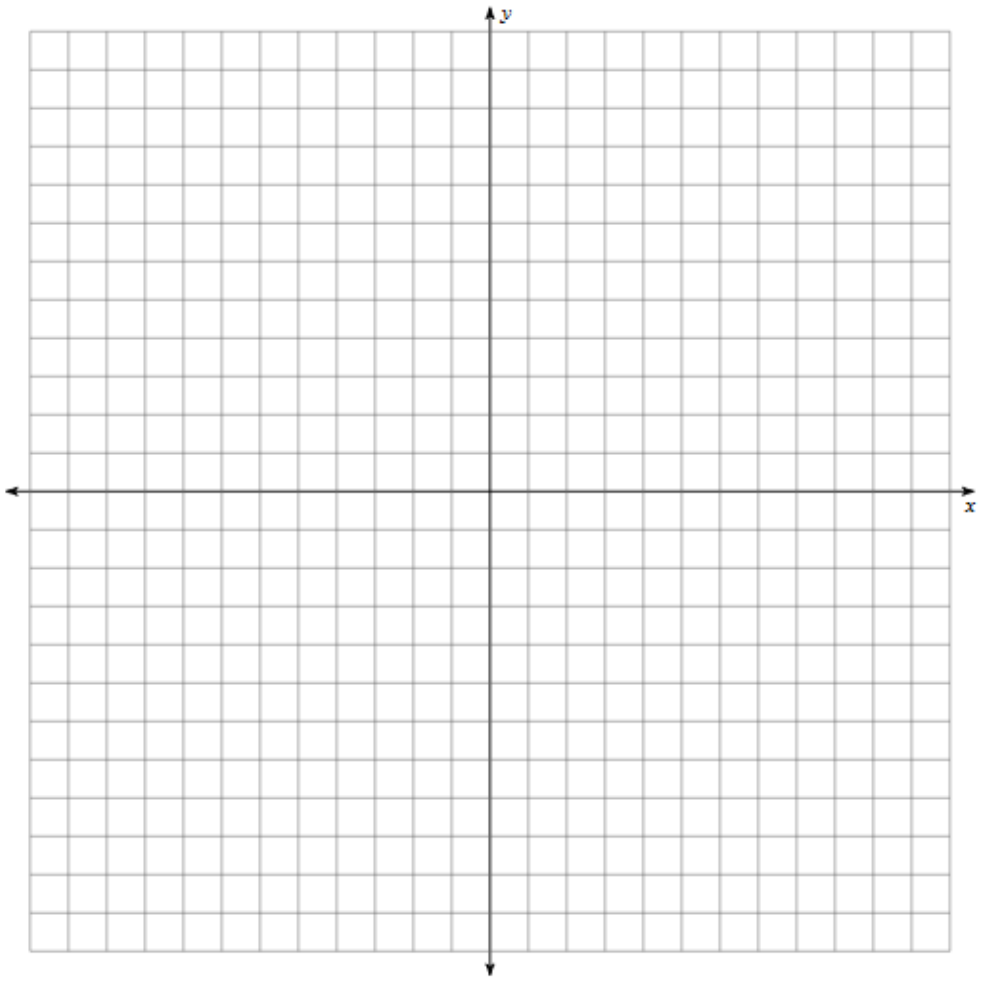


Function	Proper Function $f(x) = a\,f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$n(x) = 5\sqrt{0.4x-1}-3$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.

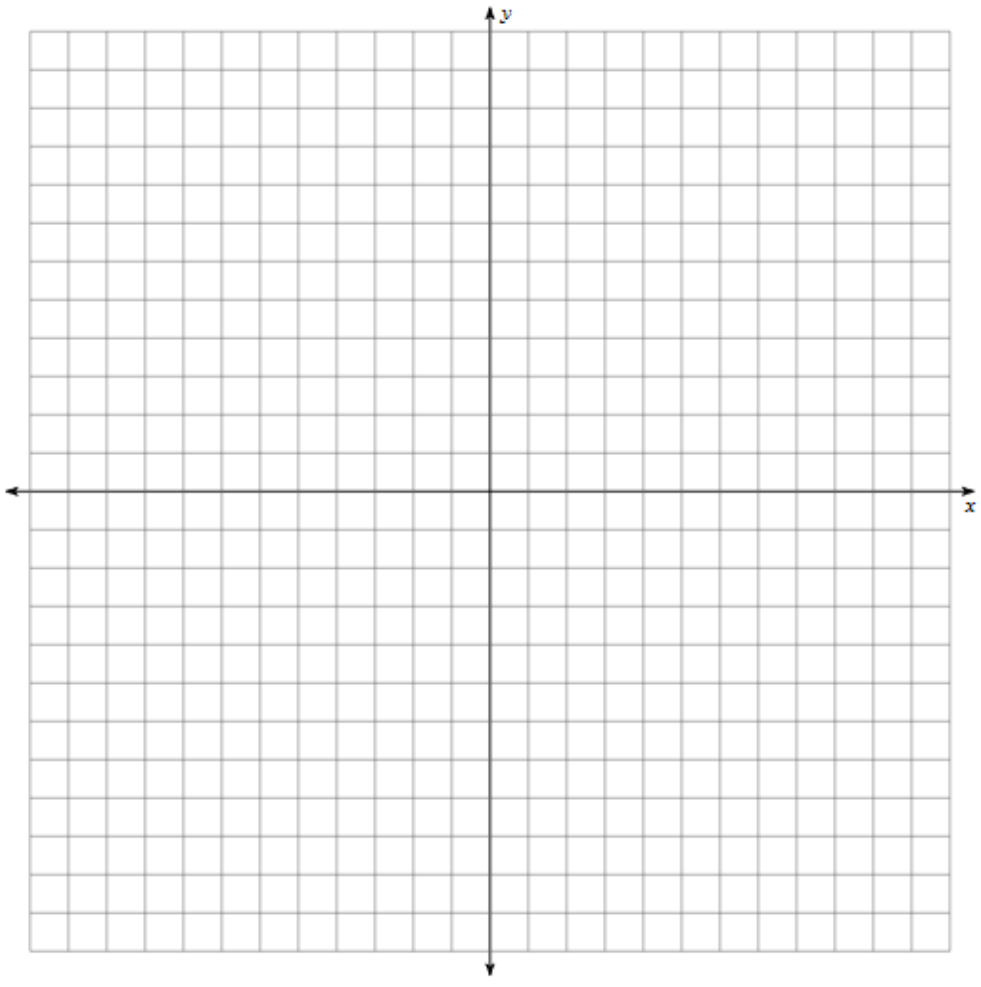


Function	Proper Function $f(x) = a\, f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$p(x) = -3\left\|\frac{2}{3}x+6\right\|-2$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.

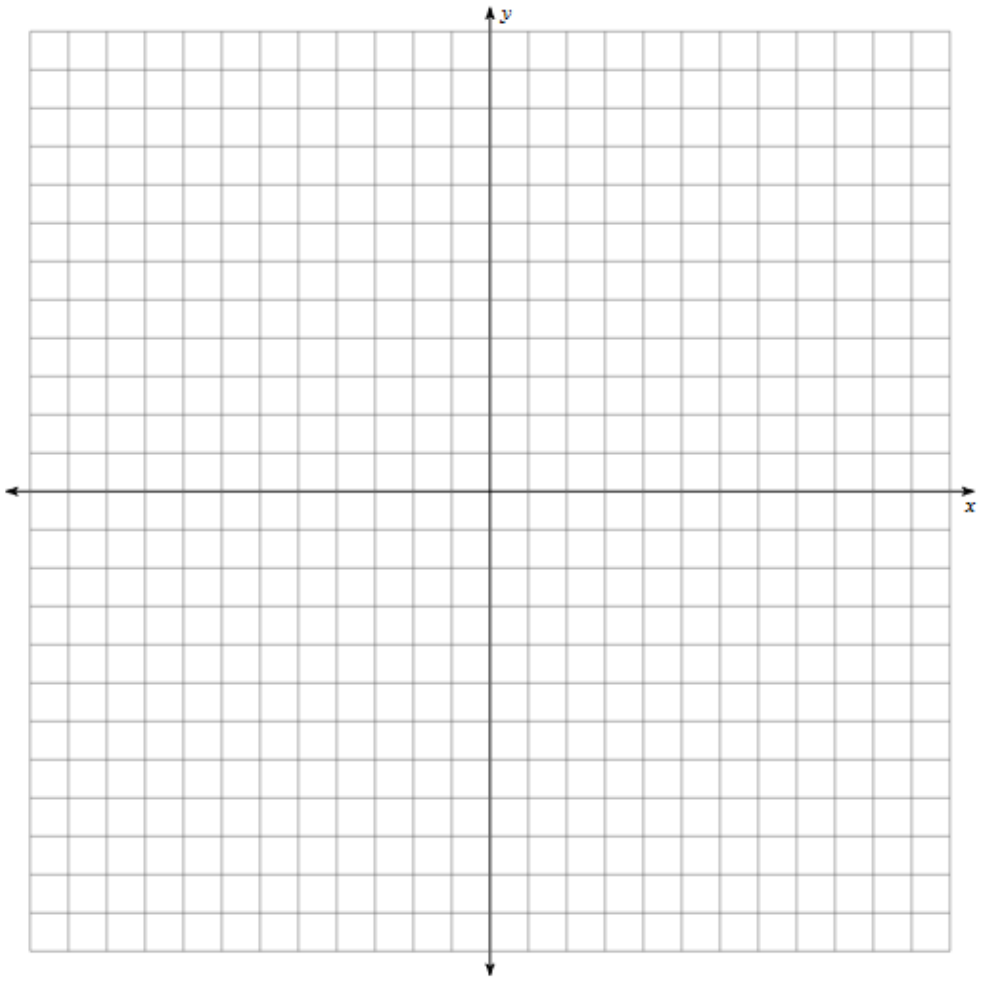


Function	Proper Function $f(x) = a\, f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$r(x)=\dfrac{-2}{-x+4}-6$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.

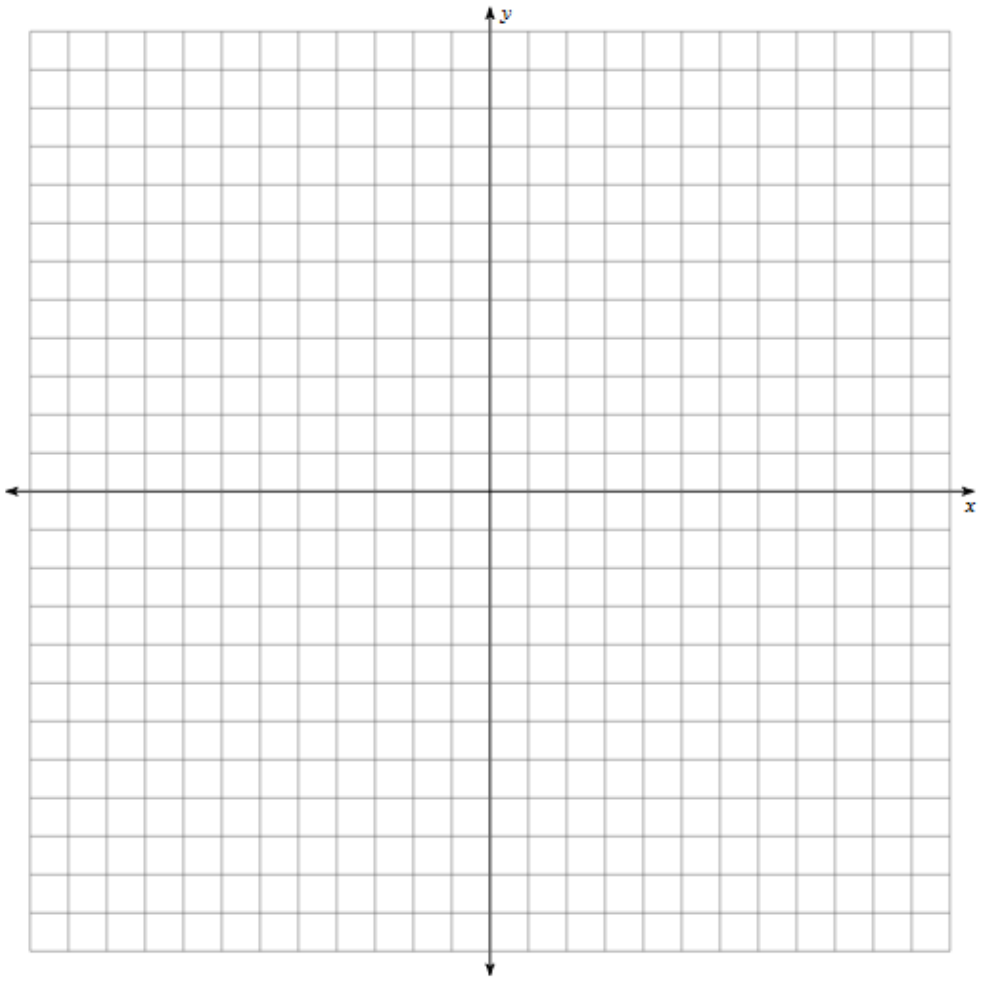


Function	Proper Function $f(x) = a\,f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$u(x)=\frac{3}{2}(x+7)^2-10$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.



Function	Proper Function $f(x) = a\,f\left(k(x-d)\right)+c$	Vertical Stretch ***a***	Horizontal Stretch ***1/k***	Horizontal Shift ***d***	Vertical Shift ***c***
$w(x)=\frac{-3}{4}\sqrt{\frac{-5}{2}x+10}+12$					

Domain		Range		y-int (x=0)	

	Parent Function:		Transformed Function	
Table Of Values				

Graph both the parent function and the transformed function.