Name:					
Date:					
I	Period:	A1	A2	A3	B1

## PRACTICE #2: Graphs, Equations, & Descriptions of Transformations

For each family of functions, complete all parts AND label important features of the graphs. Important features include vertices, points of inflection, endpoints, asymptotes, and lines of symmetry.

EXAM	PLE:	
Family of functions: QUADRATIC FUNCTIONS		<b>_</b>
0	What is the equation of the parent function?	· · · · · · · · · · · · · · · · · · ·
a.	what is the equation of the patent function?	<u>-+++++++</u> +++++++++++++++++++++++++++++
		┝ <del>╶┥┥┥┥┥┥┥┥┥╋╹┥┥┥┥┥</del>
b Crank the parent function on the avec		
o. Orapii die parent function on the axes.		
с.	Graph a curve in this family that is translated 4 units	
	up oriented down and vertically compressed by a	· · · · · · · · · · · · · · · · · · ·
	up, offented down, and vertically compressed by a	····
	factor of $\frac{1}{2}$ .	<u>╶┼┼┼┼┼┼┼╋┼┼┼┼┼┼┼┼</u>
		· · · · · · · · · · · · · · · · · · ·
A	What is the equation of this transformation?	
u.	what is the equation of this transformation?	
1 5		
1. Fan	nly of functions: CUBIC FUNCTIONS	<b>1</b>
0	What is the equation of the parent function?	
а.	what is the equation of the parent function?	<b>_</b>
		· · · · · · · · · · · · · · · · · · ·
b.	Graph the parent function on the axes.	
		<del></del>
C	Graph a curve in this family that is translated 3 units	
υ.	Oraph a curve in this family that is translated 5 units	
	left and 1 unit down.	
d	What is the equation of this transformation?	
u.	what is the equation of this transformation?	<b>_</b>
<b>2</b> E		
2. Fam	ily of functions: ABSOLUTE VALUE FUNCTIONS	
я	What is the equation of the parent function?	
и.	what is the equation of the parent function:	
		····
		· + + + + + + + + <b>₽</b> + + + + + + + + + + + + + + + + + + +
		· · · · · · · · · · · · · · · · · · ·
1		
b.	Graph the parent function on the axes.	
C	Granh a curve in this family that is translated 1 unit to	
υ.	Graph a curve in this family that is translated 1 that to	
	the right, 6 units down, and vertically stretched by a	
	factor of 3.	
d.	What is the equation of this transformation?	
		┝┼┼┼┼┼┼┼╋┼┼┼┼┼┼┼┼┤

3 Fam	ily of functions: SOUARE ROOT FUNCTIONS				-	-		-		
5. I uiii		-			+	+	+	+	-	-
					+	+		+	1	
a.	What is the equation of the parent function?									
_										
b.	Graph the parent function on the axes.									_
										-
	Craph a surve in this family that is translated 4 unit to				+	+	+ +	+	-	-
C.	Graph a curve in this family that is translated 4 unit to				_	+		_		
	the right, oriented down, and vertically stretched by a	-	-		+	-		+	+ •	-+-
	factor of 2	-			+	-		+	+ •	-+-
		-	-		+	+	+	+	+-	-+-
		-			+	+		+		-+-
d.	What is the equation of this transformation?			$\vdash$	+	+	+	+	+-	-
	1				+	+		+	1	-
					+	+		+		
					+	+		+	1	
					_			_		
4. Fam	ily of functions: <b>RATIONAL FUNCTIONS</b>				T	T			1	
a	What is the equation of the parent function?									
<i>u</i> .	that is the equation of the parent function.									
										_
									1	-
			_		_	_		_	+ •	
1			_		+	+	$\square$	+	+ •	-
D.	Graph the parent function on the axes.	$\vdash$		$\mapsto$	+	+	+ +	+	+ -	+
		-			+	+	+	+	+ •	+
C	Graph a curve in this family that is translated 2 unit to	-	-		+	+		+	+ •	+
U.	Shaph a curve in this family that is translated 2 unit to	-	-		+	-		+	+ •	-
	the left and 5 units up.		-	$\vdash$	+	+	$\square$	+	+ •	
			-		+	+	$\square$	+		
h	What is the equation of this transformation?				+	+		+		
u.	what is the equation of this transformation?									
5. Fam	ily of functions: LINEAR FUNCTIONS								1	
a.	What is the equation of the parent function?									
	······································				_			_		
							$\square$			
							$\square$			
1.	Crearly the account formation on the second			$\square$	_	_		_	-	-
D.	Graph the parent function on the axes.				_	+	$\left  \right $	_	+	+
			-	$ \mid$	-	-	$\left  \right $	-	+	
C	Granh a line in this family that is translated A units up	H	-	$\vdash$	+	+	+ +	+	+-	+
U.	Staph a fine in this family that is translated $+$ units up,			$\vdash$		+	+	-	+-	+
	oriented down, and stretched by a factor of $\frac{1}{3}$ .	-		$\vdash$	-	+	+	-	+-	+
1	-		1. I.				1 1		1.1	

d. What is the equation of this transformation?