I can identify specific transformations on exponential functions.

-3 -2-1

0

1

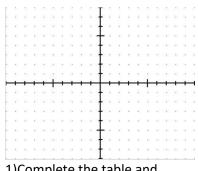
2

3

Complete the table for  $f(x) = 2^x$  and plot the points on *EACH* graph

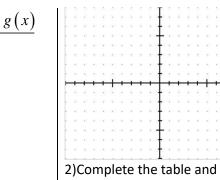
This will be the main, parent function for the rest of the functions below.

$$\begin{array}{c|c}
x & f(x) \\
\hline
-3 & \\
-2 & \\
-1 & \\
0 & \\
1 & \\
2 & \\
3 & \\
\end{array}$$

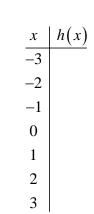


1)Complete the table and  $\operatorname{graph} g(x) = 2^x - 7$ 

Describe the transformation in words of g(x) from f(x).



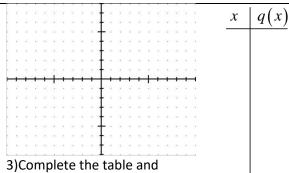
 $\operatorname{graph} h(x) = -2^x$ 



 $\boldsymbol{x}$ 

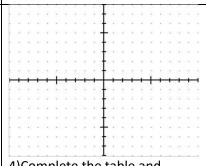
r(x)

Describe the transformation in words of h(x) from f(x).



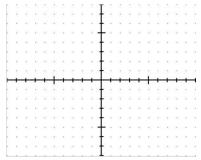
 $\operatorname{graph} q(x) = 2^{x-3}$ 

Describe the transformation in words of q(x) from f(x).



4)Complete the table and  $\operatorname{graph} r(x) = 2^{x+3}$ 

Describe the transformation in words of r(x) from f(x).



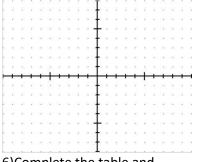
5)Complete the table and graph  $s(x) = 2^{-x}$ 

Describe the transformation in words of s(x) from f(x).

			20	12	10	0.00			16	100	10	
x	s(x)		8	*					16	8		
л	$S(\lambda)$				17			3	1	S.		
<del>-3</del>		ľ	0	100	83			5	100	39	19	
-3		ľ	8	85	40			100	100	9		
-2		l.	8	60	10			8	28	2	3	
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				$\tilde{g}_{ij}^{(i)}$	10			9	100	3	٠	
1		1	85	80	10			87	88	38	13	
			81	.53	11	883	898	3	32	12	3	
2		6)Complete the										
3		graph $t(x) = 2$										
		_					`					

 $\operatorname{graph} t(x) = 2^{x+8} + 3$ 

Describe the transformation in words of t(x) from f(x).



t(x)

ne table and