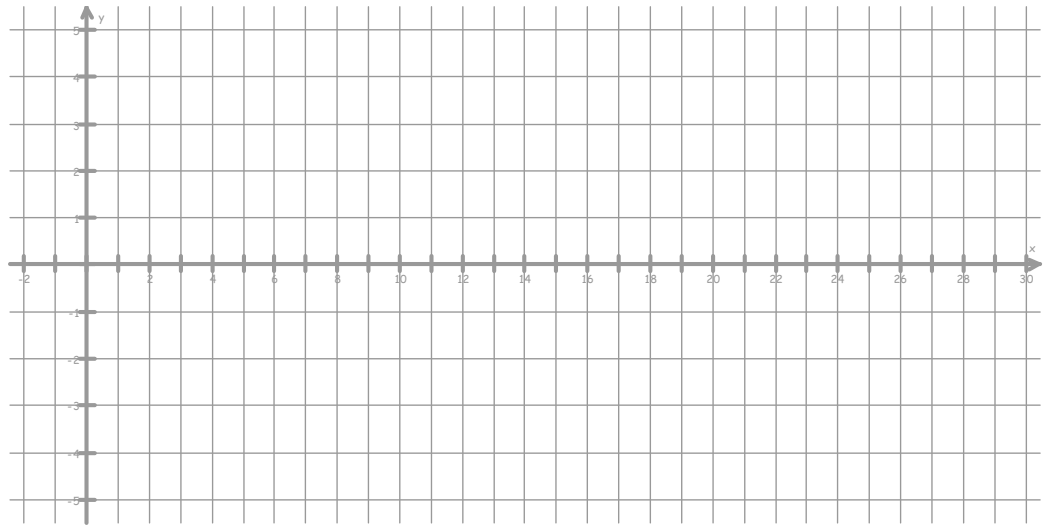


Transformations of Logarithmic Functions

1. Graph the following base logarithmic functions.

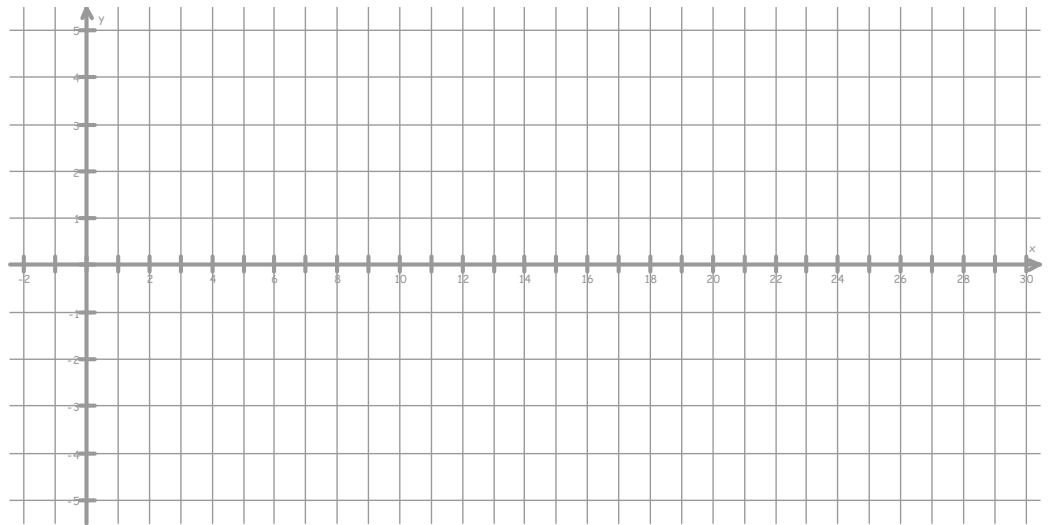
a) $y = \log_2 x$

Exp. Form _____



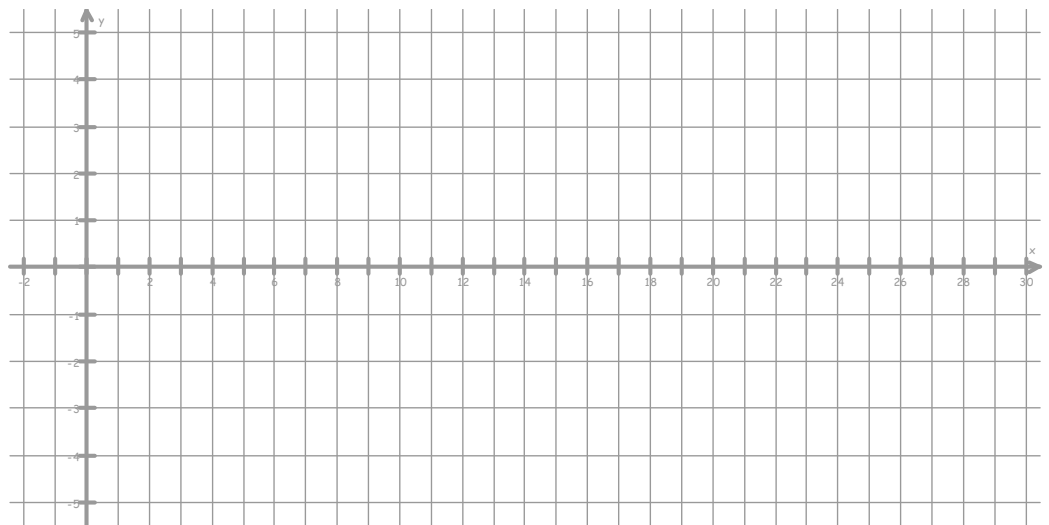
b) $y = \log_3 x$

Exp. Form _____



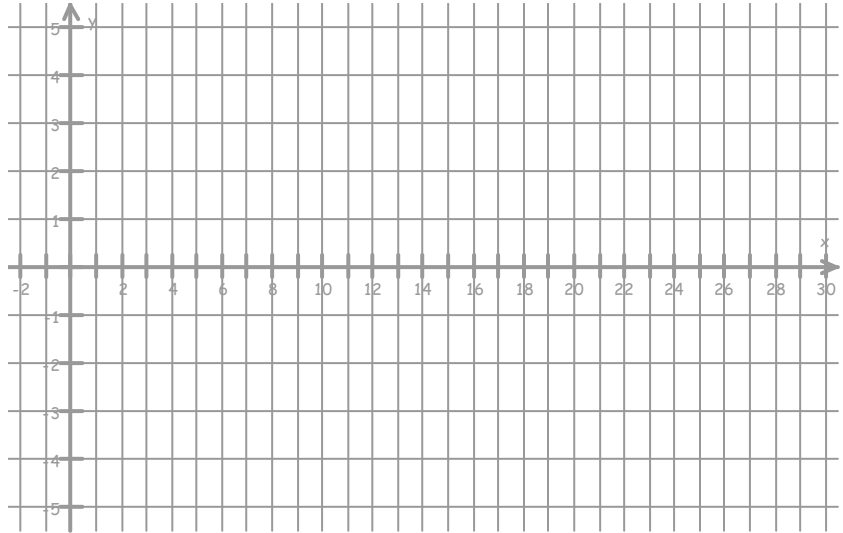
c) $y = \log_{\frac{1}{2}} x$

Exp. Form _____

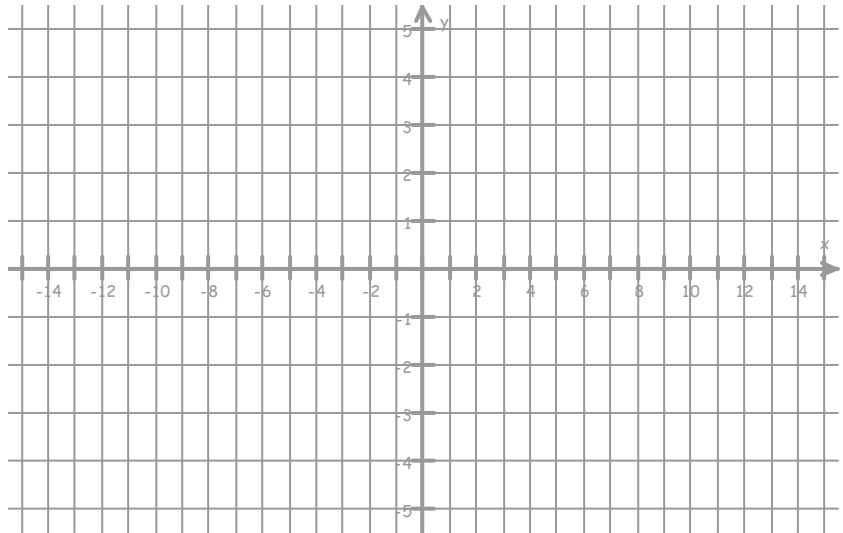


2. Given the base function $y = \log_2 x$ and the following equations, state the transformations on the base function and graph the transformed equation.

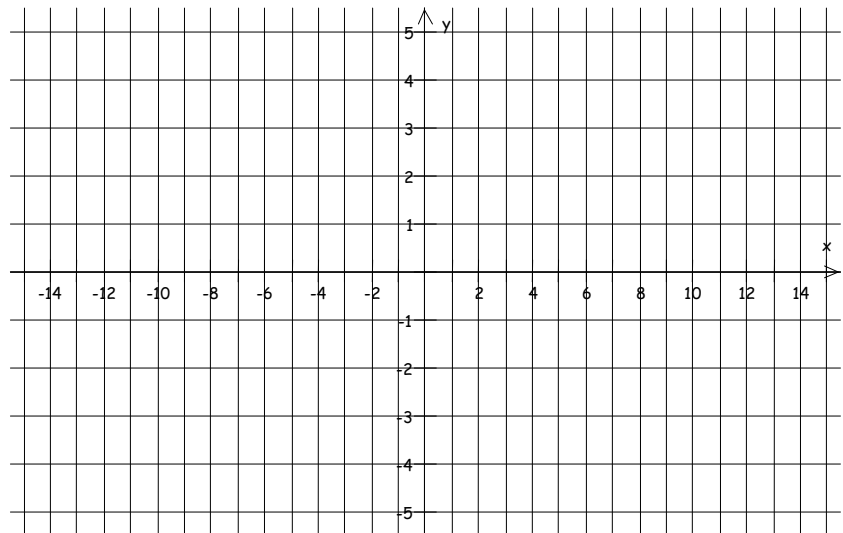
$y = \log_2(x+2) - 4$	Locate points from new "origin":
Transformations	
Base Function	
Exp. Form	



$y = -2\log_2 x$	Locate points from new "origin":
Transformations	
Base Function	
Exp. Form	



$y = \log_2(-2x)$	Locate points from new "origin":
Transformations	
Base Function	
Exp. Form	



3. For each function, describe the transformations, graph and state the domain and range.

a) $y = -2\log_3(x - 2) + 1$

Base Function: _____

Exp. Form: _____

Transformations: _____

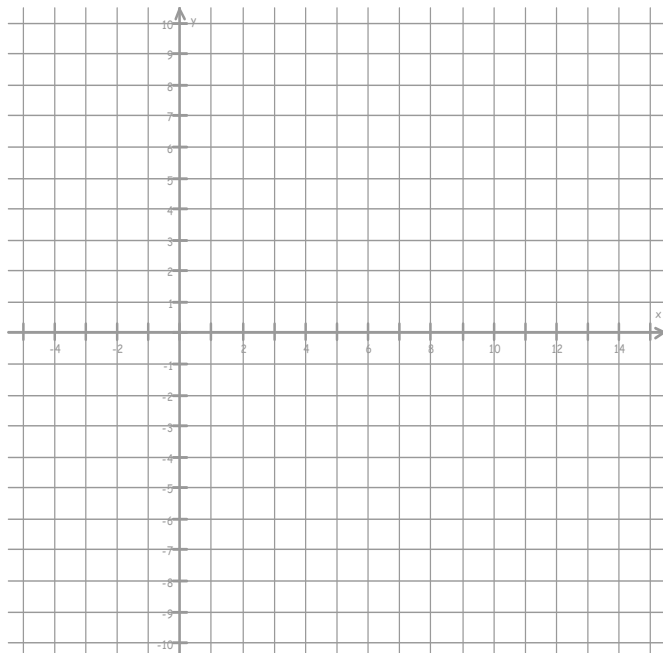
Locate points from new "origin": _____

Domain: _____

Range: _____

Increasing/decreasing function? _____

End behaviours _____



b) $y = 2\log_{\frac{1}{3}}(-x - 1) - 4$

Base Function: _____

Exp. Form: _____

Transformations: _____

Locate points from new "origin": _____

Domain: _____

Range: _____

Increasing/decreasing function? _____

End behaviours _____

