

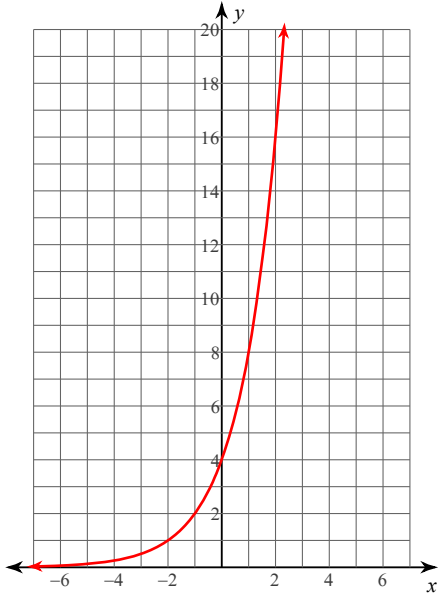
Unit 4 Quiz Review

Name _____

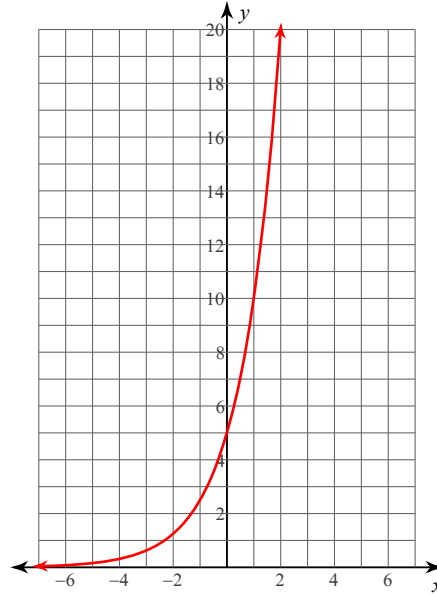
Date _____ Period _____

Sketch the graph of each function.

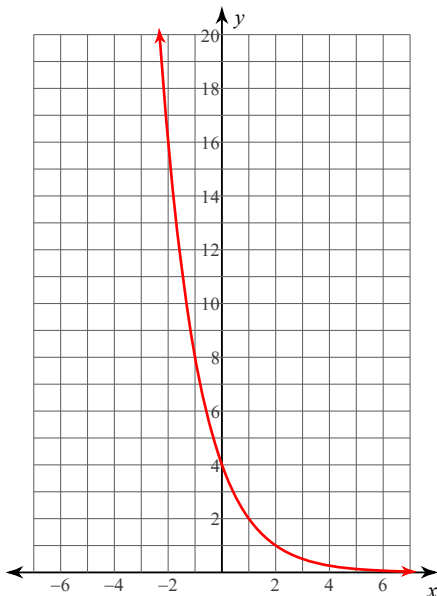
1) $y = 4 \cdot 2^x$



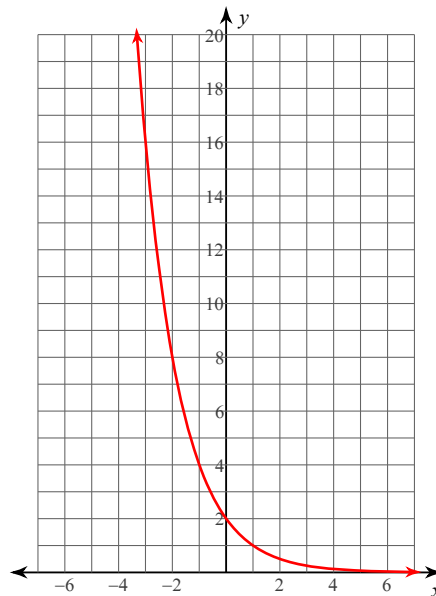
2) $y = 5 \cdot 2^x$



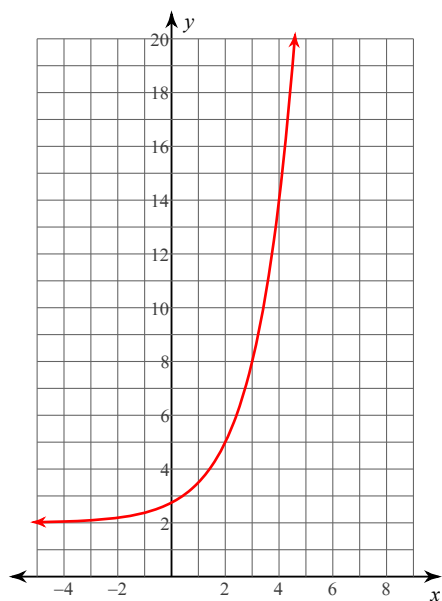
3) $y = 4 \cdot \left(\frac{1}{2}\right)^x$



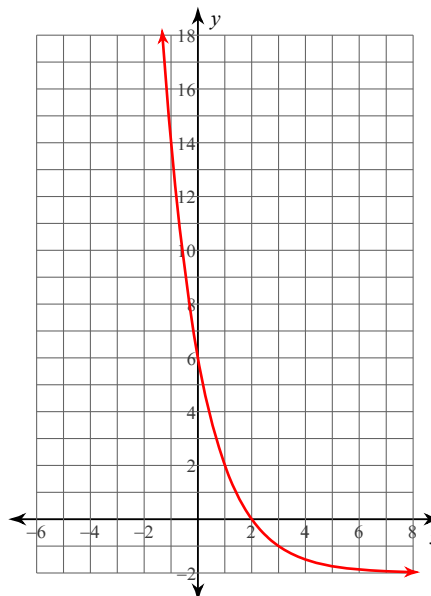
4) $y = 2 \cdot \left(\frac{1}{2}\right)^x$



5) $y = 3 \cdot 2^{x-2} + 2$

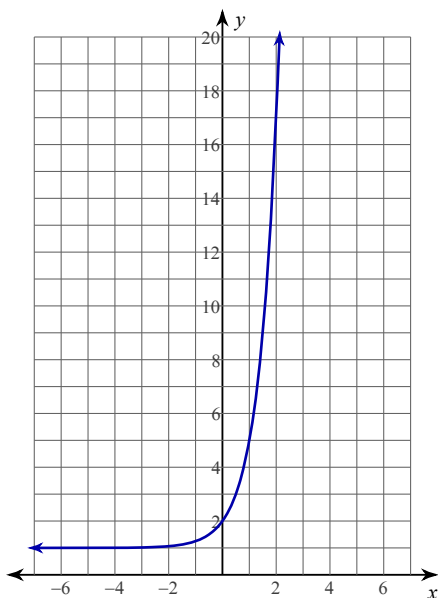


6) $y = 4 \cdot \left(\frac{1}{2}\right)^{x-1} - 2$



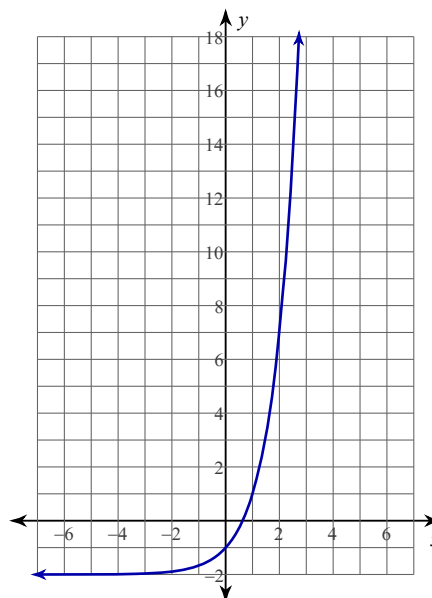
Write an equation for each graph.

7)



$y = 4^x + 1$

8)

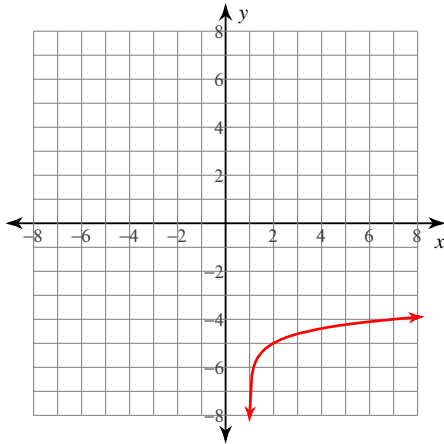


$y = 3^x - 2$

Graphing Logarithms

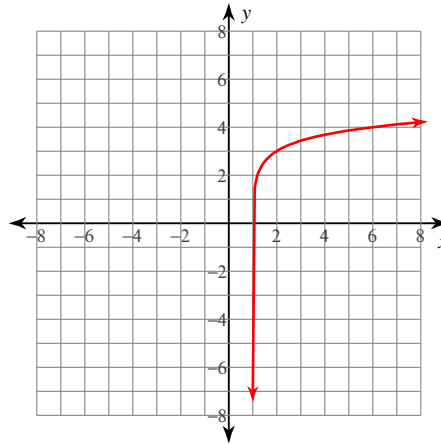
Identify the domain and range of each. Then sketch the graph.

1) $y = \log_6(x - 1) - 5$



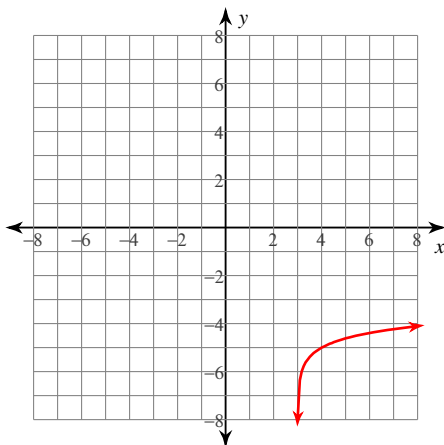
Domain: $x > 1$
Range: All reals

2) $y = \log_5(x - 1) + 3$



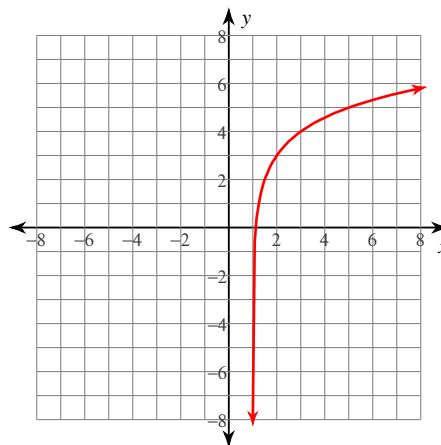
Domain: $x > 1$
Range: All reals

3) $y = \log_6(x - 3) - 5$



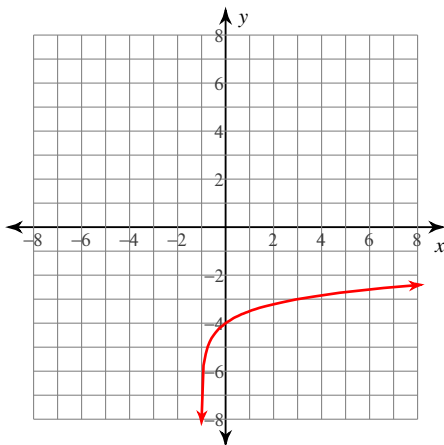
Domain: $x > 3$
Range: All reals

4) $y = \log_2(x - 1) + 3$



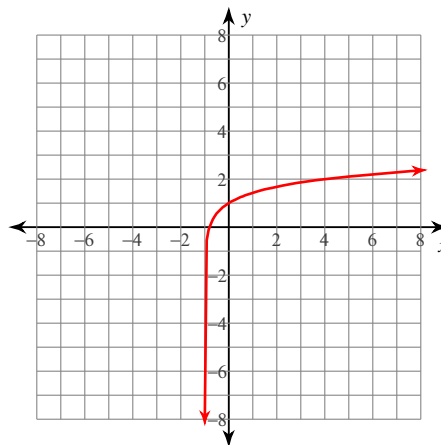
Domain: $x > 1$
Range: All reals

5) $y = \log_4(x + 1) - 4$



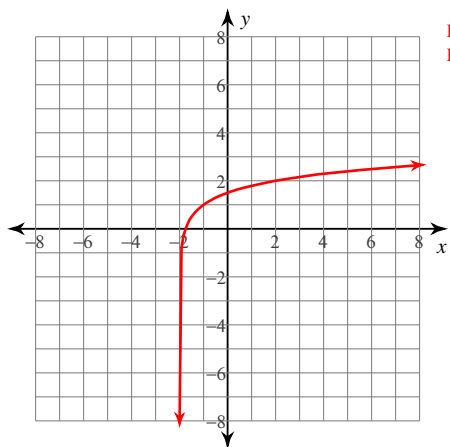
Domain: $x > -1$
Range: All reals

6) $y = \log_5(x + 1) + 1$



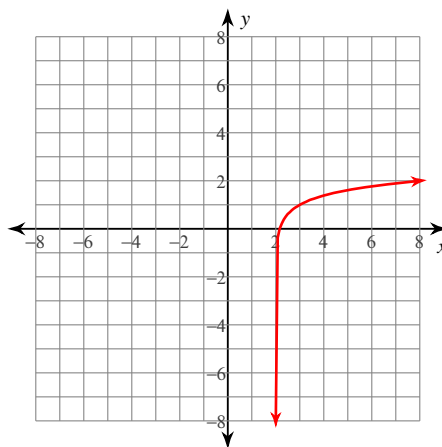
Domain: $x > -1$
Range: All reals

7) $y = \log_4 (x + 2) + 1$



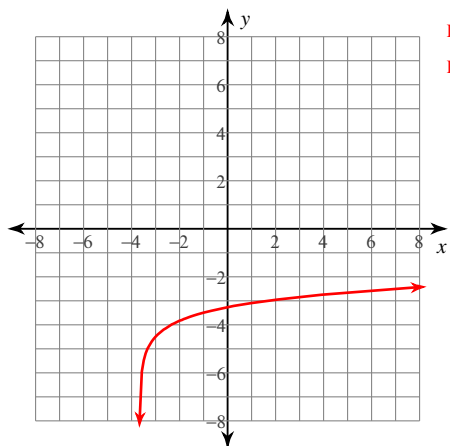
Domain: $x > -2$
Range: All reals

8) $y = \log_6 (x - 2) + 1$



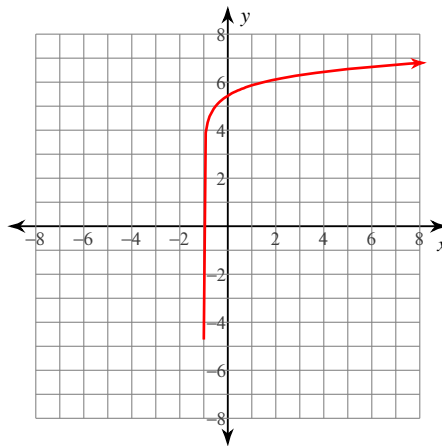
Domain: $x > 2$
Range: All reals

9) $y = \log_4 (3x + 11) - 5$



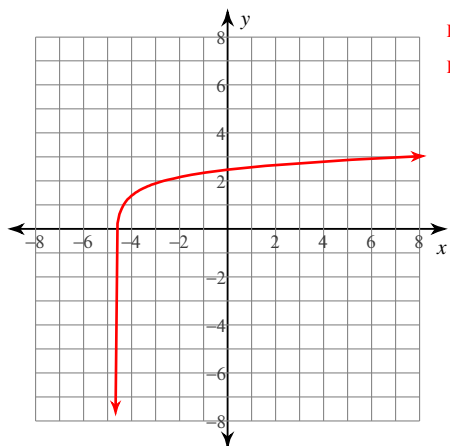
Domain: $x > -\frac{11}{3}$
Range: All reals

10) $y = \log_5 (2x + 2) + 5$



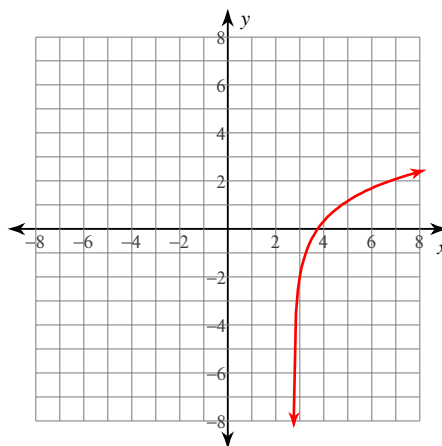
Domain: $x > -1$
Range: All reals

11) $y = \log_6 (3x + 14) + 1$



Domain: $x > -\frac{14}{3}$
Range: All reals

12) $y = \log_2 (4x - 11) - 2$



Domain: $x > \frac{11}{4}$
Range: All reals

Without a calculator, match each function with its graph.

_____ 1] $f(x) = 2^x$

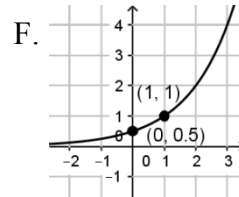
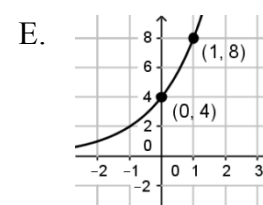
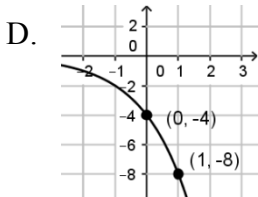
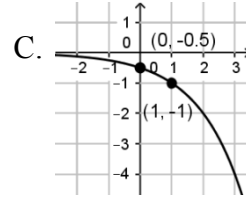
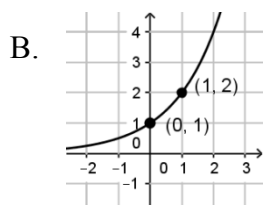
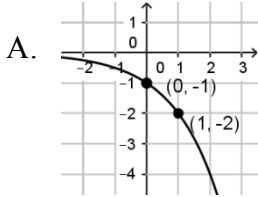
_____ 2] $f(x) = -2^x$

_____ 3] $f(x) = 4(2)^x$

_____ 4] $f(x) = \frac{1}{2}(2)^x$

_____ 5] $f(x) = -\frac{1}{2}(2)^x$

_____ 6] $f(x) = -4(2)^x$



Graph without a calculator. Label the two anchor points and dash in the asymptote.

7] $f(x) = 3(2)^{x+2} - 1$

Growth or decay (parent)?

Domain:

Asymptote:

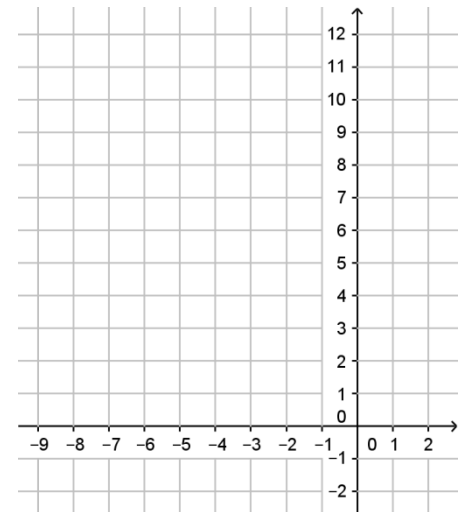
Range:

Transformations:

$(0, \quad)$			
$(1, \quad)$			
$(-1, \quad)$			

Coordinates of two more guide points:

(,) and (,)



8] $f(x) = -4^{x+1} + 3$

Growth or decay (parent)?

Domain:

Asymptote:

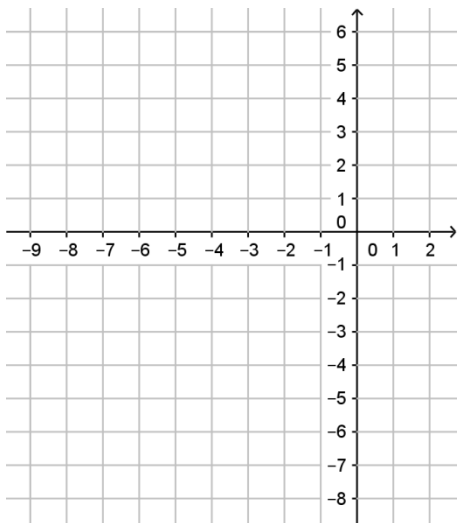
Range:

Transformations:

$(0, \quad)$			
$(1, \quad)$			
$(-1, \quad)$			

Coordinates of two more guide points:

(,) and (,)



Without a calculator, match each function with its graph.

____ 1. $f(x) = \log_2 x$

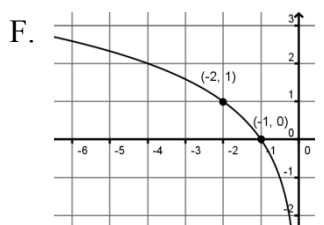
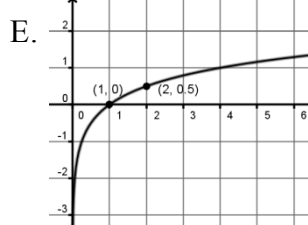
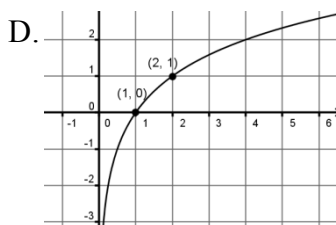
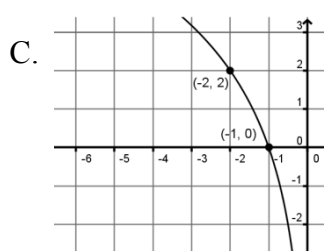
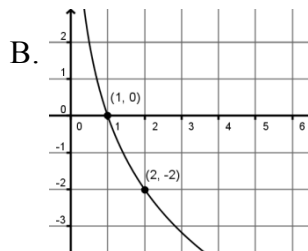
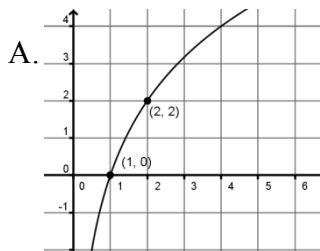
____ 2. $f(x) = \log_2(-x)$

____ 3. $f(x) = 2 \log_2 x$

____ 4. $f(x) = \frac{1}{2} \log_2 x$

____ 5. $f(x) = 2 \log_2(-x)$

____ 6. $f(x) = -2 \log_2 x$



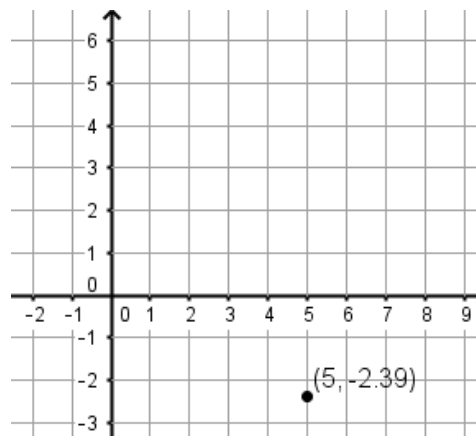
Graph without a calculator. Label the two anchor points and dash in the asymptote.

7. $f(x) = 3 \log_{\frac{1}{3}} x + 2$

a = b = c = h = k = Domain:

Asymptote: Range:

Anchor points	Multiply y by ____	Divide x by ____	Add ____ to x	Add ____ to y
(, 0)				
(, 1)				
(, -1)				



8. $f(x) = -\log_3 \left(-\frac{1}{3}x\right)$

a = b = c = h = k = Domain:

Asymptote: Range:

Anchor points	Multiply y by ____	Divide x by ____	Add ____ to x	Add ____ to y
(, 0)				
(, 1)				
(, -1)				

