Graphing Logarithmic Functions

Find the vertical asymptote, domain and key point of each of the following logarithmic functions.

1. $f(x)=\log_2(x+5)-3$

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

3. $f(x)=\log_3(x-4)+2$

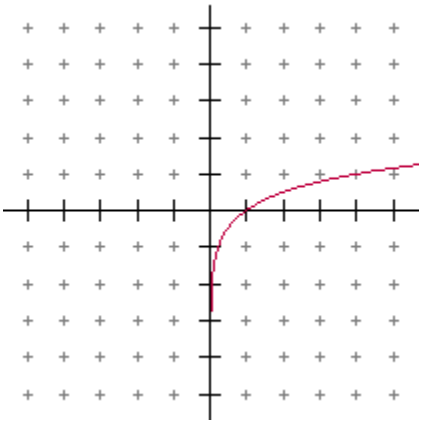
4. $f(x)=3\log_2(x-1)+2$

5. $f(x)=\frac{1}{2}\log_4(x-6)-5$

6. $f(x)=-4\log_2(x-2)$

Match the graphs with their appropriate equation below.

7



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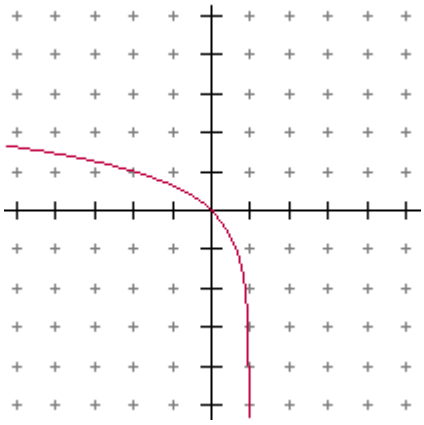

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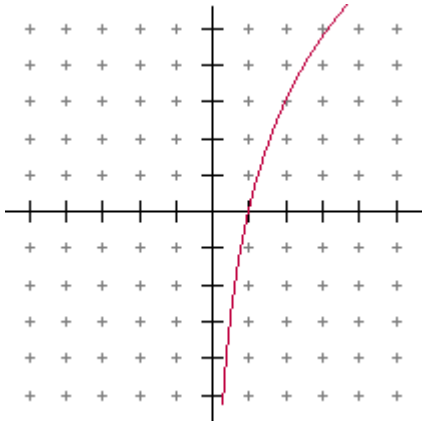

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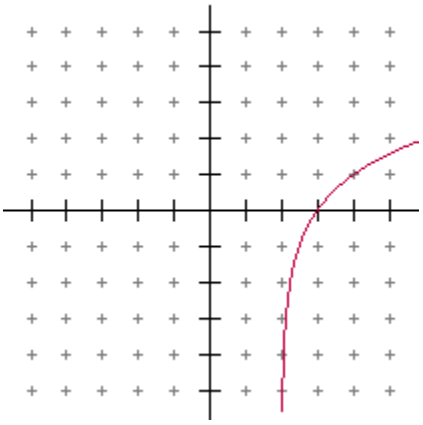

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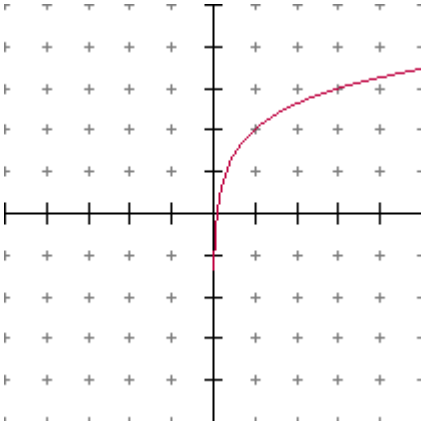

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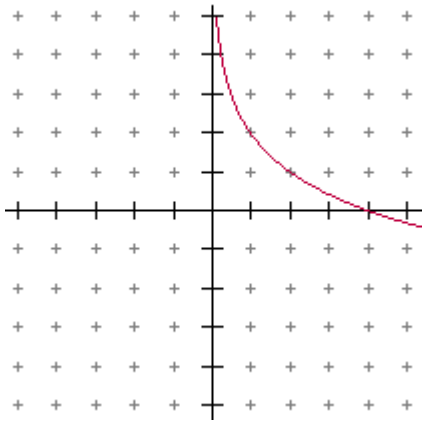


A) $f(x)=\log_2(x-2)$

B) $f(x)=\log_3(1-x)$

C) $f(x)=-\log_2 x+2$

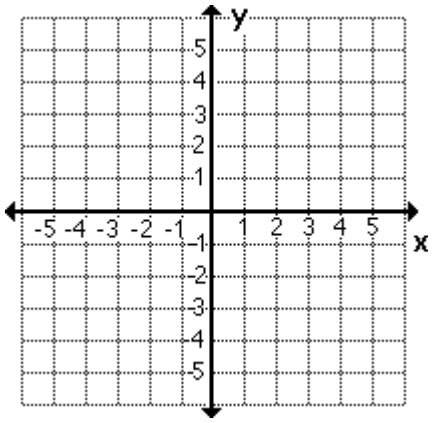
D) $f(x)=\log_3 x+2$

E) $f(x)=\frac{1}{2}\log_2 x$

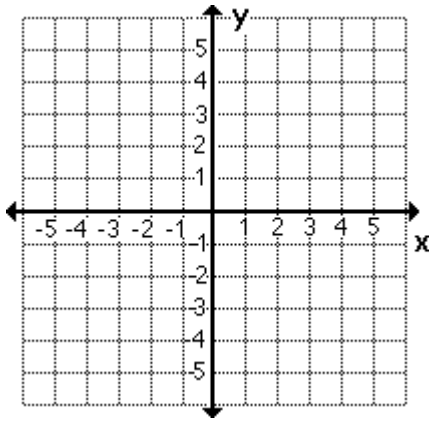
F) $f(x)=3\log_2 x$

Graph each of the following logarithmic functions. Label the key point for each.

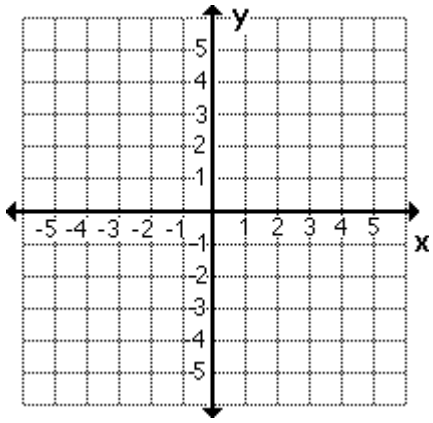
13 $f(x)=\log_2 x$



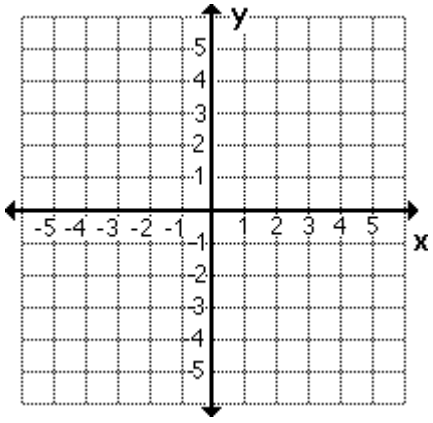
14 $f(x)=\log_4 x$



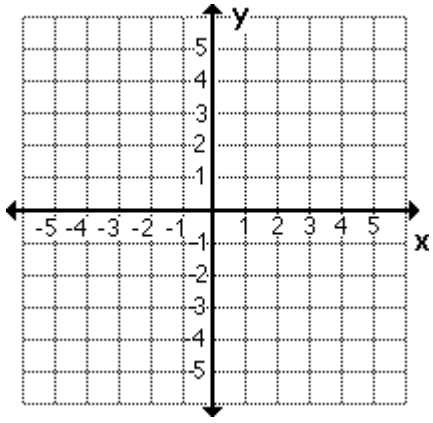
15 $f(x)=\log_4(x-3)$



16 $f(x)=\log_2(x+2)$



17 $f(x)=\log_3 x+2$



18 $f(x)=\log_5(x-3)+2$