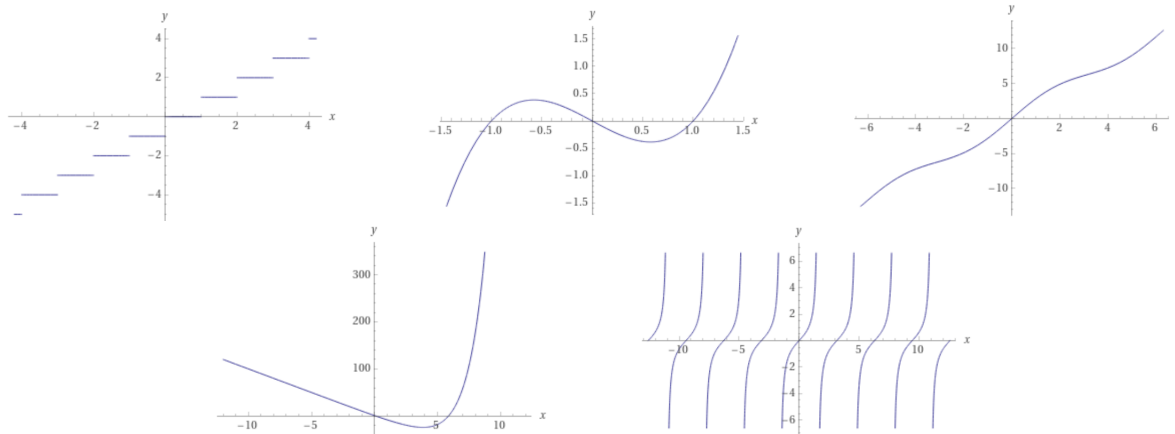


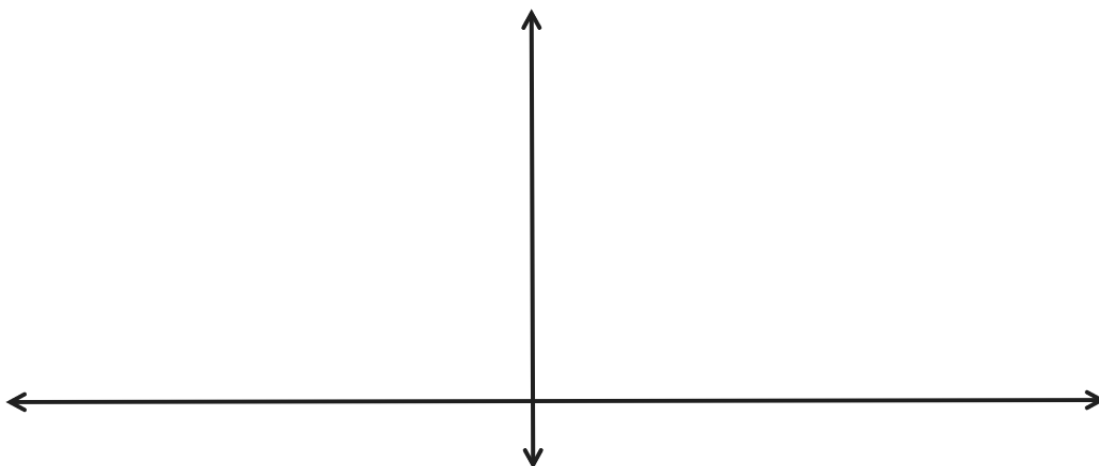
1. Exactly one of the functions graphed below is one-to-one. Circle that one.



2. Compute $\lim_{x \rightarrow -\infty} 3^x + 4$.

3. Suppose $f(x) = \frac{x+1}{x-4}$. Find a formula for the inverse function $f^{-1}(x)$.

4. Sketch the graph of the exponential function $f(x) = \left(\frac{1}{4}\right)^x$.



5. Differentiate the function $f(x) = 2e^{5x} + x$.
6. Suppose $f(x) = x + x^2 + x^3$. It has an inverse, but that inverse is not simple to write down, so I'm not asking you to find it. However, we can still calculate $(f^{-1})'(a)$ at the particular value $a = 3$.

The derivative of $f(x)$ is $f'(x) =$ _____

Since $x = f^{-1}(3)$ is the same as $f(x) = 3$, we can figure out that $f^{-1}(3) =$ _____

Combining these with the formula for derivative of the inverse, $(f^{-1})'(3) =$ _____