The Inverse Function

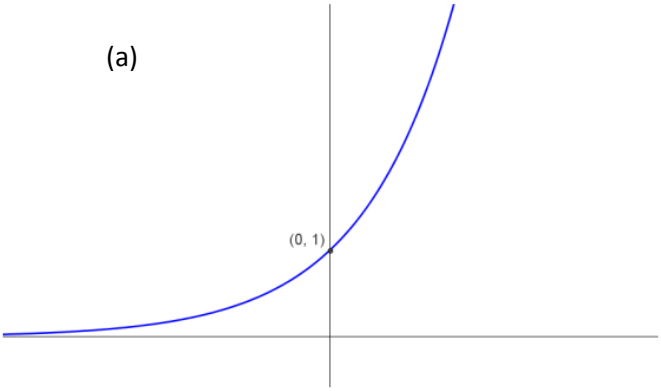
1. In each example shown below, find the inverse function

(a) y = 3x (b) y = 5x - 1 (c) y = $\frac{1}{5}x + 2$ (d) y = $\frac{3}{4}x - 4$

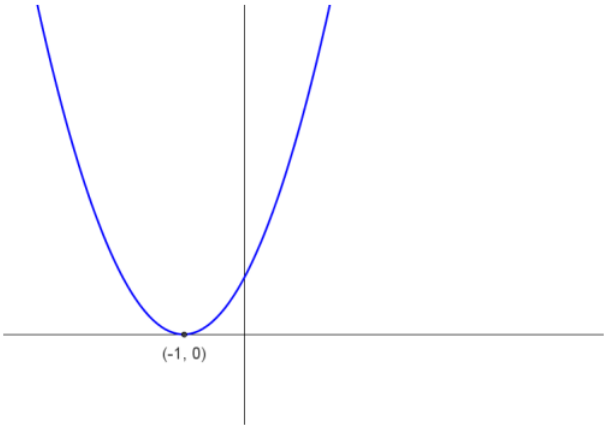
2. (a) Plot the graph of the function f(x) = 3x + 2.
(b) On the graph, draw $f^{-1}(x)$.

3. Copy the graphs shown and sketch the inverse of each function.

(a)



(b)



4. In question 3(b) the inverse is not a function. Explain why.

5. Find the inverse of each function.

(a) $g(x) = 6 - x$ (b) $g(x) = 2x^3 + 4$ (c) $h(x) = \frac{7x+3}{2}$

(d) $y = \sqrt[3]{x} - 5$ (e) $f(x) = \frac{1}{x} - 3$ (f) $h(x) = \frac{1}{x-1}$