Inverse Functions (A)

Section A   *Find the inverse of each function.*

Functions	Solution
1) $f(x) = x + 4$	
2) $f(x) = 6x - 2$	
3) $f(x) = \dfrac{x}{8}$	
4) $f(x) = \dfrac{x}{2} - 7$	
5) $f(x) = \dfrac{11 - 5x}{4} - 12$	
6) $f(x) = x^2 - 10$	
7) $f(x) = \dfrac{2x^2 + 9}{15}$	
8) $f(x) = \sqrt{4x + 13}$	

Section B

1) Let $f(x) = 2x^3 - 16$. Solve the equation $f^{-1}(x) = 3$.

2) When $f(x) = x^2 + 4x + 3$, $x > 0$, find $f^{-1}(x)$.

3) Let $f(x) = \dfrac{2 + 3x}{x - 2}$ and $g(x) = x^2$

   a) Find the inverse of $f(x)$

   b) Find the value of $f^{-1}g(-2)$

Extension $f(x) = \dfrac{1}{3}(2x - 5)$, $g(x) = \dfrac{4}{2 - x}$, solve the equation $f^{-1}(x) = g(x)$