

EMT112 Practice Problems V

Functions

October 1, 2010

- Find the inverse function of f .
 - (i) $f(x) = 2x + 1$ (ii) $f(x) = 6 - x$
 - $f(x) = \frac{x-2}{x+2}$
 - $f(x) = \sqrt{2+5x}$
- Find the domain of each function given in question 1.
- If $f(x) = 1 + x^2$ and $g(x) = \sqrt{x-1}$, find each of the following functions.
 - $f \circ g$
 - $g \circ f$
 - $(f \circ g)(2)$
 - $f \circ g \circ f$
- If $f(x) = 5 - 2x$, find (a) $f(3)$ (b) $f^{-1}(3)$.
- Draw the graphs of the following linear functions.
 - $y = 3x - 2$
 - $y = -\frac{2}{5}x + 1$
 - $2x + y = 5$
 - $3x - 2y = 12$
- Find the equation of the line that passes through the points $(0, 2)$ and $(5, 6)$.