

1. Determine whether the functions $f(x) = \frac{2-x}{3x}$ and $g(x) = \frac{2}{3x+1}$ are inverses.

2. Find the inverse of the function $f(x) = \frac{1}{2x+3}$ and state the domain and range of both f and f^{-1} .

3. Restrict the domain of $f(x) = (x+3)^2 + 2$ so that it is one-to-one. Then find its inverse, stating the domain and range of both f and f^{-1} and then graph both on the same set of axes.

