

'Review Sec 6.2, 6.5 and Complex Numbers

Graph the function. State the domain and range.

1. $f(x) = \frac{2}{x} + 1$

2. $h(x) = \frac{-3}{x+1} - 2$

3. $g(x) = \frac{3x+10}{x+2}$

4. $h(x) = \frac{-2x+3}{x-1}$

Simplify.

5.
$$\frac{\frac{2}{x+1}}{\frac{3}{x} + \frac{5}{x+1}}$$

6.
$$\frac{\frac{3}{x^2}}{\frac{5}{x-3} - \frac{1}{x}}$$

Find the inverse if it exists.

7. $f(x) = \frac{3}{x} - 1$

8. $g(x) = \frac{4}{x+7}$

Solve.

9. $\frac{3}{x+2} = \frac{5}{x-2}$

10. $\frac{2}{x-4} = \frac{x-3}{x-1}$

11. $\frac{3}{4x} + \frac{1}{8} = \frac{7}{4x}$

12. $\frac{16}{x^2-4x} - \frac{8}{x-4} = \frac{4}{x}$