

# Rational functions

For each rational function, identify all holes, vertical asymptotes, zeros, and horizontal asymptotes. Then sketch the graph.

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



2.  $f(x) = \frac{x^2 + 5x + 6}{x^2 + 3x + 2}$



3.  $g(x) = \frac{3x^2}{x^2 - 9}$



4.  $f(x) = \frac{x^3 - 9x}{3x^2 - 6x - 9}$

