Review 2.6-2.8

Solve the equation algebraically. Identify any extraneous solutions.

$$2x + \frac{12}{x} = 11$$

Solve the equation algebraically. Identify any extraneous solutions.

$$\frac{x}{x+2}+\frac{5}{x-3}=\frac{25}{x^2-x-6}$$

Solve the equation algebraically. Identify any extraneous solutions.

$$\frac{3}{x+2}+\frac{6}{x^2+2x}=\frac{3-x}{x}$$

Solve the polynomial using factoring and a sign chart

$$(x+3)(x^2+1)(x^2-8x+16)<0$$

Determine the real values of x that cause the function to be zero, undefined, positive and negative

$$f(x)=\frac{(x-4)(x-1)}{\sqrt{x+3}}$$

Solve the polynomial using a sign chart

$$\frac{x+3}{x^2-4} \geq 0$$

Solve the polynomial using a sign chart

$$\frac{x^2-7}{x^2-x-6} \geq 0$$

Find the domain of the function f. Use limits to describe the behavior of f(x) at value(s) of x not in its domain.

$$f(x) = \frac{1}{x+3}$$

Identify the horizontal and vertical asymptotes and use limits to describe the corresponding behavior. Sketch the graph.

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