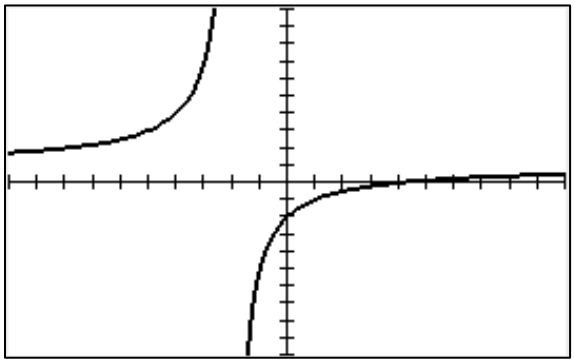
Math 3 Name_____

Unit 4 – Lesson 6 Period _____ Date _____

Graphing Rational Equations

Given the rational equation & its graph, state the following information:

1. $y = \frac{x-4}{x+2}$



Vertical asymptote: _____

Horizontal asymptote: _____

x-intercept: _____

y-intercept: _____

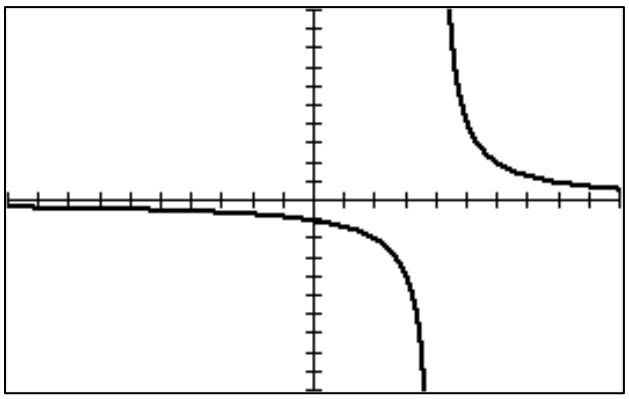
$f(x) \to$ _____ $f(x) \to$ _____

$x \to -\infty$ $x \to +\infty$

Domain: _____

Range: _____

2. $y = \frac{4}{x-4}$



Vertical asymptote: _____

Horizontal asymptote: _____

x-intercept: _____

y-intercept: _____

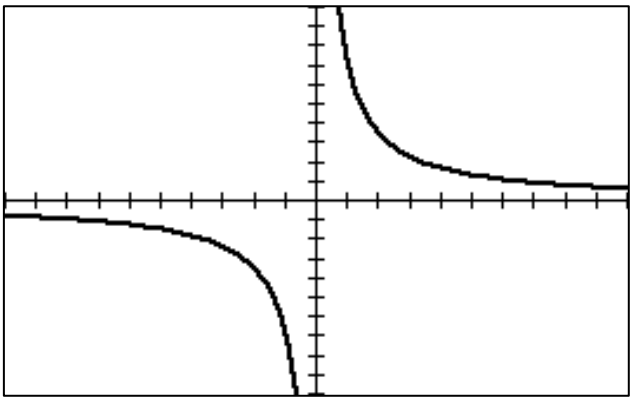
$f(x) \to$ _____ $f(x) \to$ _____

$x \to -\infty$ $x \to +\infty$

Domain: _____

Range: _____

3. $y = \frac{7}{x}$



Vertical asymptote: _____

Horizontal asymptote: _____

x-intercept: _____

y-intercept: _____

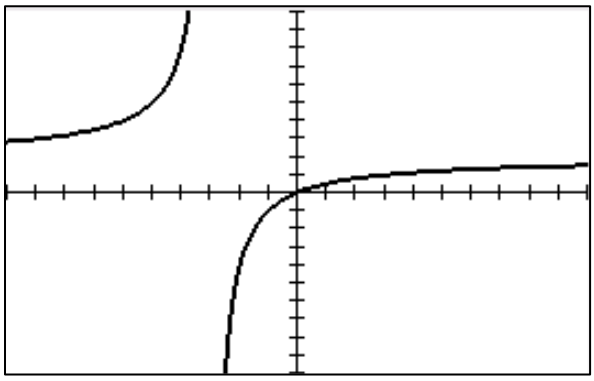
$f(x) \to$ _____ $f(x) \to$ _____

$x \to -\infty$ $x \to +\infty$

Domain: _____

Range: _____

4. $y = \frac{6x}{3x+9}$



Vertical asymptote: _____

Horizontal asymptote: _____

x-intercept: _____

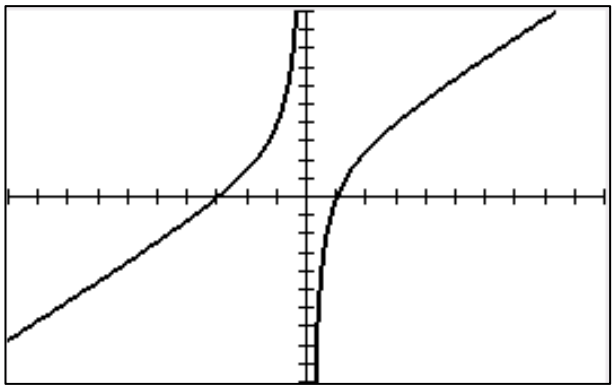
y-intercept: _____

$f(x) \to$ _____ $x \to -\infty$ $\quad$ $f(x) \to$ _____ $x \to +\infty$

Domain: _____

Range: _____

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



Vertical asymptote: _____

Horizontal asymptote: _____

x-intercept: _____

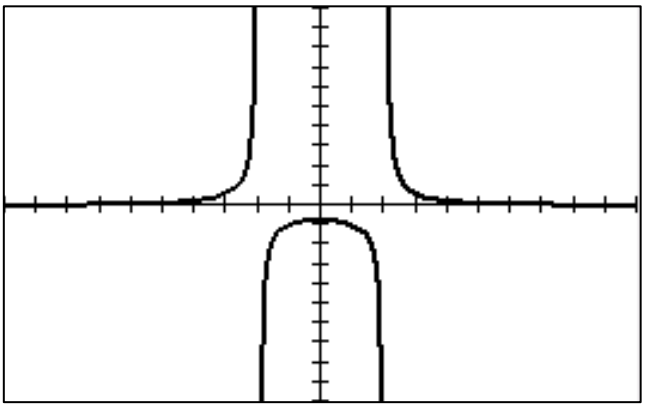
y-intercept: _____

$f(x) \to$ _____ $x \to -\infty$ $\quad$ $f(x) \to$ _____ $x \to +\infty$

Domain: _____

Range: _____

6. $y = \frac{3}{x^2-4}$



Vertical asymptote: _____

Horizontal asymptote: _____

x-intercept: _____

y-intercept: _____

$f(x) \to$ _____ $x \to -\infty$ $\quad$ $f(x) \to$ _____ $x \to +\infty$

Domain: _____

Range: _____