Precalculus
Section 2.6 B

Name_____
Period_____Date_____

Graph the rational function and answer the given questions. Show <u>ALL</u> asymptotes.

1. $g(x) = \frac{x-2}{x^2-3x-4}$

Hole:

Vertical asymptote:

Horizontal asymptote:

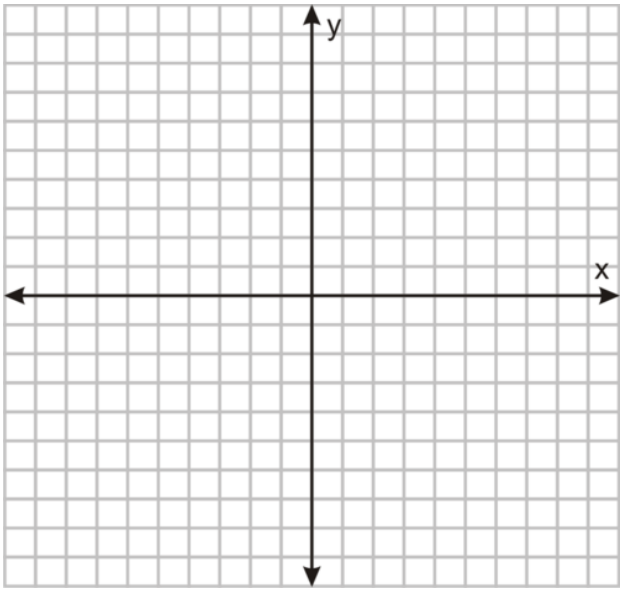
End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:

Range:



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

Hole:

Vertical asymptote:

Horizontal asymptote:

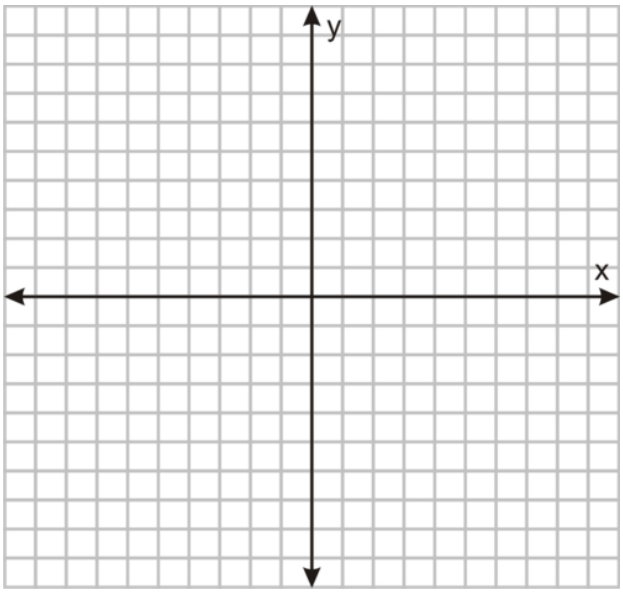
End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:

Range:



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

Hole:

Vertical asymptote:

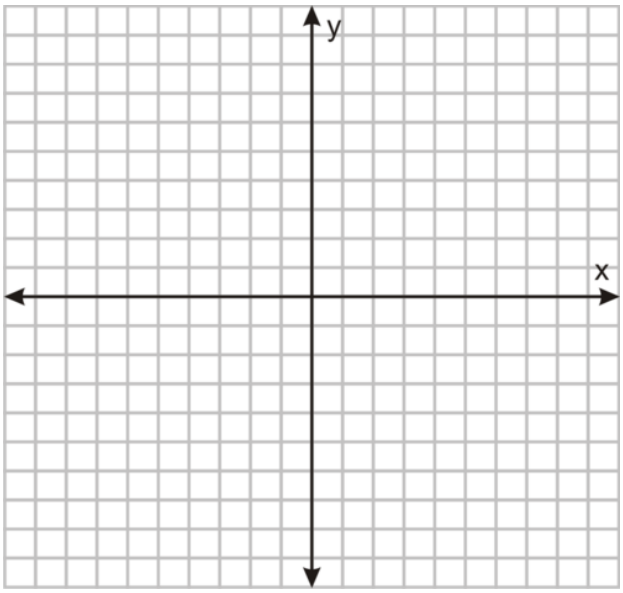
Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:



4. $f(x) = \frac{2x^2-4x+1}{x^2+2x}$

Hole:

Vertical asymptote:

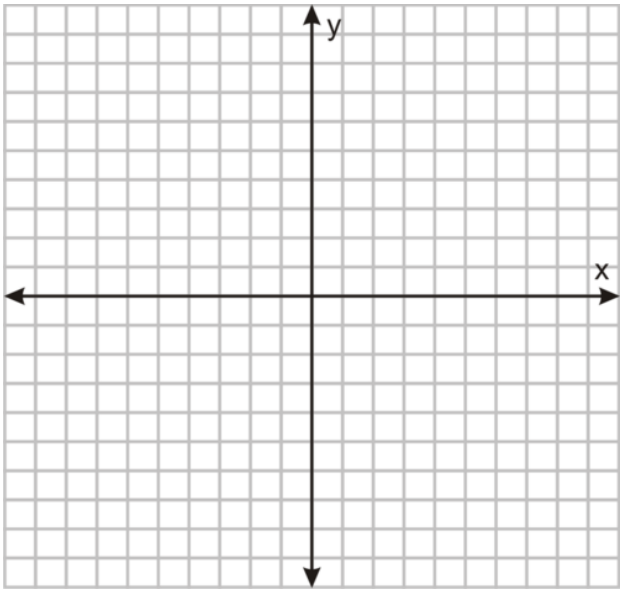
Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:



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

Hole:

Vertical asymptote:

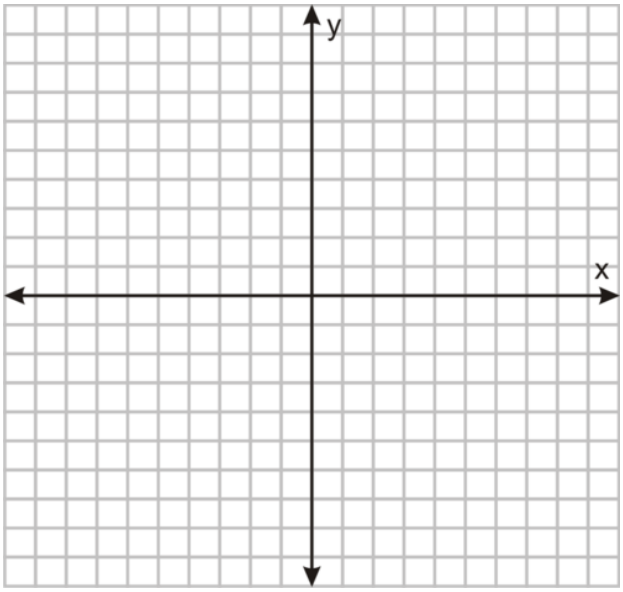
Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:



6. $h(x) = \frac{x-1}{x^2-x-6}$

Hole:

Vertical asymptote:

Horizontal asymptote:

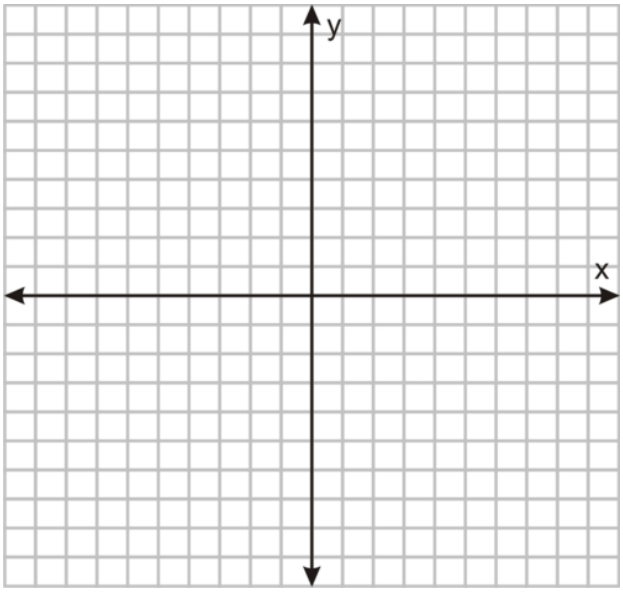
End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:

Range:



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

Hole:

Vertical asymptote:

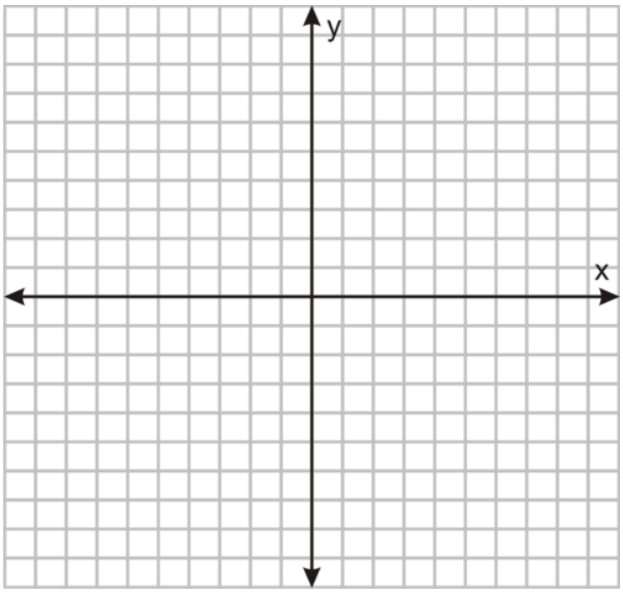
Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:



8. $g(x) = \frac{x^3-8}{x+2}$

Hole:

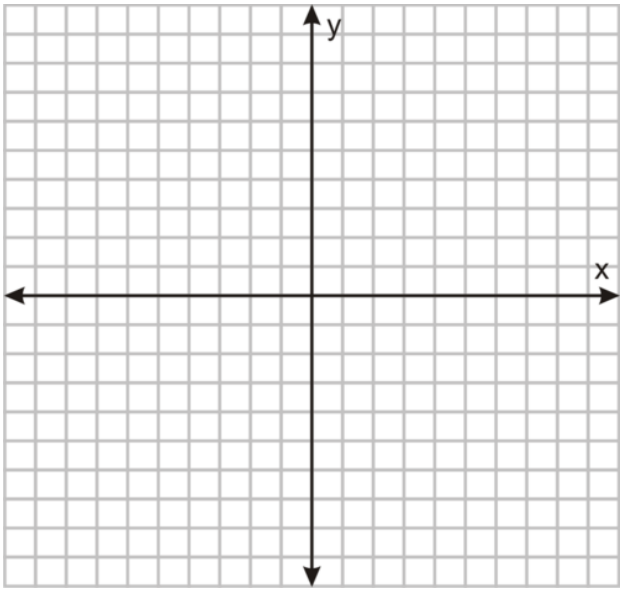
Vertical asymptote:

Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:



9. $f(x) = \frac{x^4-2x+1}{x+2}$

Hole:

Vertical asymptote:

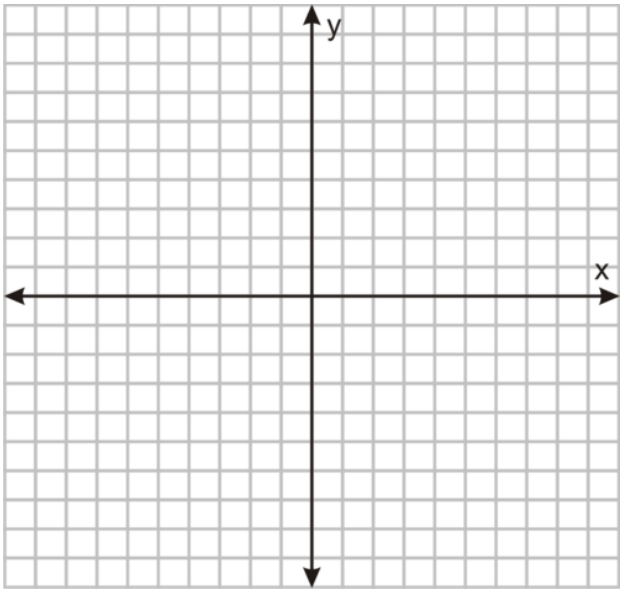
Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:



10. $f(x) = \frac{x^2+3x+2}{x^2-2x-3}$

Hole:

Vertical asymptote:

Horizontal asymptote:

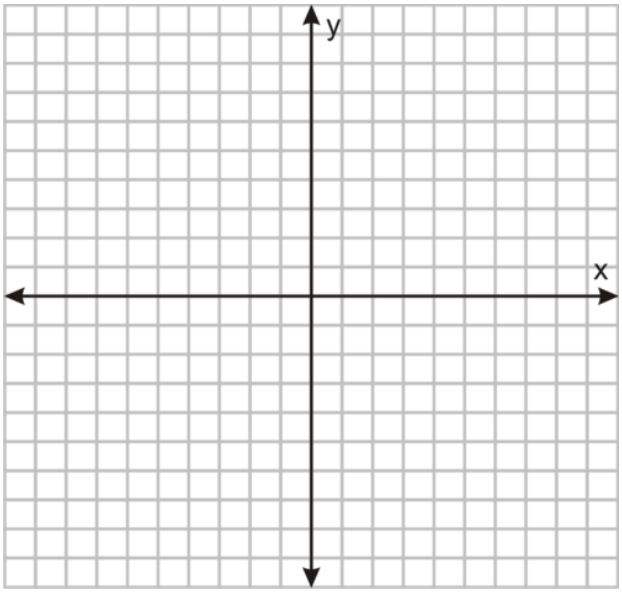
End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:

Range:



11. $h(x) = \frac{x^3-27}{x-3}$

Hole:

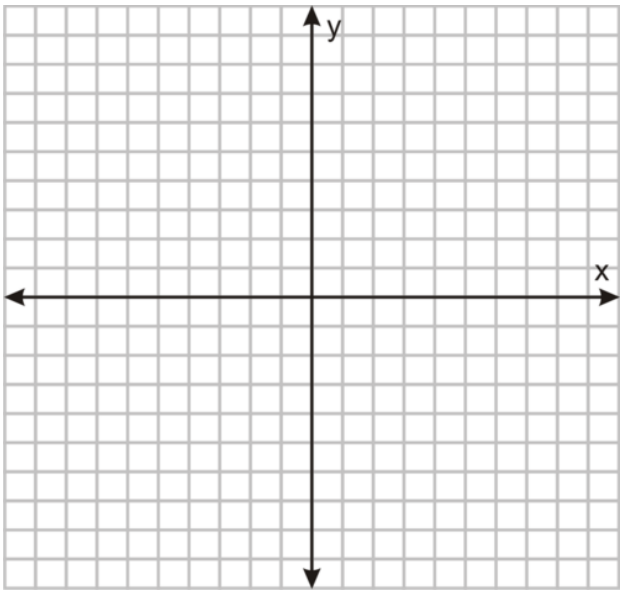
Vertical asymptote:

Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:



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

Hole:

Vertical asymptote:

Horizontal asymptote:

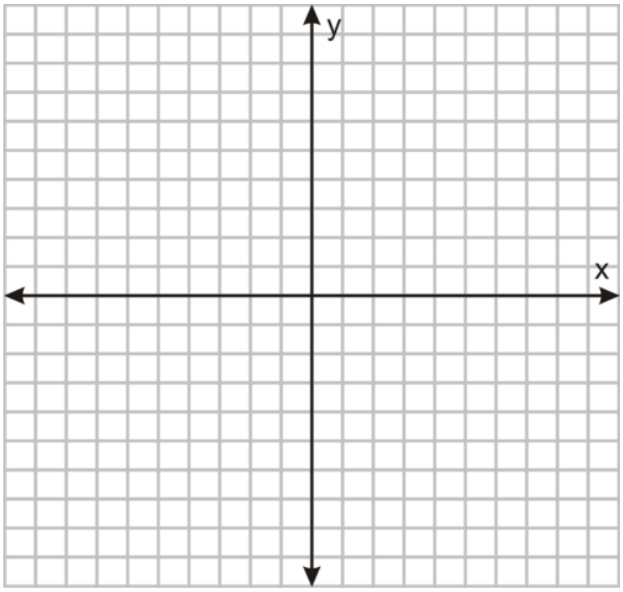
End behavior asymptote:

x – Intercept:

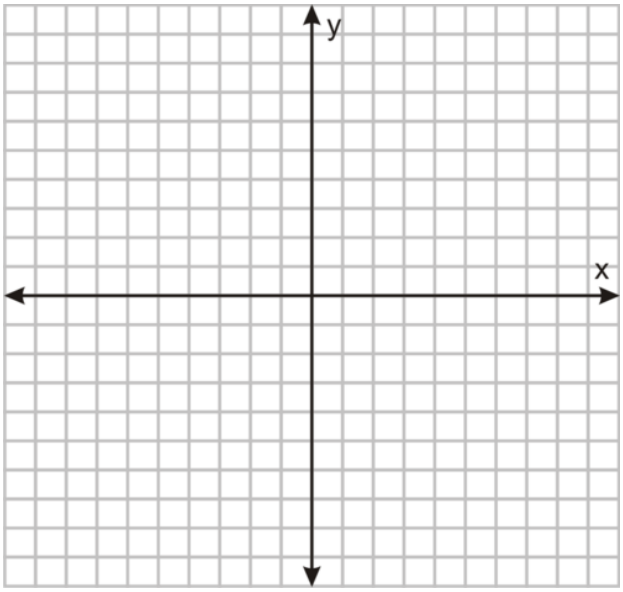
y – Intercept:

Domain:

Range:



13. $f(x) = \frac{x^2+x-2}{x^2-4}$



Hole:

Vertical asymptote:

Horizontal asymptote:

End behavior asymptote:

x – Intercept:

y – Intercept:

Domain:

Range: