

NAME _____

For each of the following rational functions, **identify all intercepts, identify all asymptotes and sketch the graph.**

1. $f(x) = \frac{x+2}{x^2-25}$

Graph

x-intercept(s) _____

y-intercept(s) _____

Vertical Asymptote(s) _____

Horizontal Asymptote _____

Slant Asymptote _____

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

Graph

x-intercept(s) _____

y-intercept(s) _____

Vertical Asymptote(s) _____

Horizontal Asymptote _____

Slant Asymptote _____

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

Graph

x-intercept(s) _____

y-intercept(s) _____

Vertical Asymptote(s) _____

Horizontal Asymptote _____

Slant Asymptote _____

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

Graph

x-intercept(s) _____

y-intercept(s) _____

Vertical Asymptote(s) _____

Horizontal Asymptote _____

Slant Asymptote _____

5. $g(x) = \frac{x^2 + x - 12}{2x^2 - 8}$

Graph

x-intercept(s) _____

y-intercept(s) _____

Vertical Asymptote(s) _____

Horizontal Asymptote _____

Slant Asymptote _____

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

Graph

x-intercept(s) _____

y-intercept(s) _____

Vertical Asymptote(s) _____

Horizontal Asymptote _____

Slant Asymptote _____