HWK 2.6 Rationals Day 1 Name_____

Asymptotes and Holes

Decide if the following have removeable discontinuities, vertical asymptotes, horizontal asymptotes, or slant asymptotes. If they do, find them, showing all work.

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

RD? _____

VA? _____

HA? _____

SA? _____

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

RD? _____

VA? _____

HA? _____

SA? _____

3. $f(x)=\frac{x^3-8}{x^2-4}$

RD? _____

VA? _____

HA? _____

SA? _____

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

RD? _____

VA? _____

HA? _____

SA? _____

5. $f(x)=\frac{x^2-6x+8}{x^2-x}$

RD? _____

VA? _____

HA? _____

SA? _____

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

RD? _____

VA? _____

HA? _____

SA? _____

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

RD? _____

VA? _____

HA? _____

SA? _____

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

RD? _____

VA? _____

HA? _____

SA? _____

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

RD? _____

VA? _____

HA? _____

SA? _____

10. $f(x)=\frac{x^2-4}{3x^2-5x-2}$

RD? _____

VA? _____

HA? _____

SA? _____