Name_____ Class _____ Date_____

Practice

8-3A

Form G

Rational Functions and Their Graphs

Find the vertical asymptotes and holes for the graph of each rational function.

5. $y = \dfrac{5-x}{x^2-1}$

Vertical Asymptotes $x = 1$
$x = -1$

Holes
none

6. $y = \dfrac{x^2-2}{x+2}$

Vertical Asymptotes ~~→~~ $x = -2$

holes none

7. $y = \dfrac{x}{x(x-1)}$

Vertical Asymptotes $x = 1$

Holes $x = 0$

8. $y = \dfrac{x+3}{x^2-9}$

Vertical Asymptotes $x = +3$

holes $x = -3$

9. $y = \dfrac{x-2}{(x+2)(x-2)}$

Vertical Asymptotes $x = -2$

Holes $x = 2$

10. $y = \dfrac{x^2-4}{x^2+4}$

Vertical Asymptotes none

holes none

11. $y = \dfrac{x^2-25}{x-4}$

Vertical Asymptotes $x = 4$

Holes none

12. $y = \dfrac{(x-2)(2x+3)}{(5x+4)(x-3)}$

Vertical Asymptotes ~~→~~ $x = -4/5$
$x = 3$

holes none