

### Graphing Rational Functions Review

Determine where each rational function will be continuous, classify the discontinuity as a hole or vertical asymptote, and finally determine if a Horizontal asymptote will exist. If one does exist, state its equation.

$$24. y = \frac{3}{x+2}$$

$$25. y = \frac{x-5}{x+1}$$

$$26. y = \frac{-4}{x-1}$$

$$27. y = \frac{(x+2)(x-2)}{x-2}$$

$$28. y = \frac{x}{x-5}$$

$$29. y = \frac{-2}{(x-3)^2}$$

$$30. y = \frac{x^2 - x}{x}$$

$$31. y = \frac{-5}{(x-3)(x+1)}$$

$$32. y = \frac{x^2}{x(x-1)}$$

$$33. y = \frac{3}{(x-4)^2}$$

$$34. y = \frac{x^2 + 3x}{x}$$

$$35. y = \frac{x^2 + 3x - 4}{x}$$

$$36. y = \frac{x}{1-x^2}$$

$$37. y = \frac{-x}{x^2 - 4}$$

$$38. y = \frac{x-1}{x^2-9}$$