Name: **Date:**

Scaffolded Practice: Graphing Rational Functions

For problems 1–3, determine the equation of the vertical asymptote in each rational function.

1. $f(x) = \dfrac{x+2}{x+3}$

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

3. $f(x) = \dfrac{x-4}{x^2+5x+6}$

For problems 4–7, determine the equation of the horizontal asymptote for each rational function, if one exists.

4. $f(x) = \dfrac{x+2}{x+3}$

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

continued

6. $f(x) = \dfrac{x-4}{x^2+5x+6}$

7. $f(x) = \dfrac{3x^2-1}{x^2-2x-35}$

For each of the rational functions shown, determine the zero(s) and *y*-intercept.

8. $f(x) = \dfrac{x+2}{x+3}$

9. $f(x) = \dfrac{x^2+3x+2}{x-2}$

10. $f(x) = \dfrac{x-4}{x^2+5x+6}$