**Name:** **Date:**

## Practice: Graphing Rational Functions and Identifying Key Features B

For problems 1–3, find the horizontal and vertical asymptotes of each rational function. Round to the nearest tenth, if necessary.

1. $f(x)=\dfrac{5x^2+2x-1}{x-3}$
2. $f(x)=\dfrac{8x-1}{4x^2-36}$
3. $f(x)=\dfrac{3x-7}{x}$

For problems 4 and 5, find the zero(s) and *y*-intercept(s) of each rational function. Write each as a set of coordinates and round to the nearest tenth if necessary.

4. $f(x)=\dfrac{x^2-6x+9}{4x+7}$
5. $f(x)=\dfrac{3x+4}{3x^2-8}$

For problems 6–9, graph each rational function.

6. $f(x)=\dfrac{2x-4}{x+1}$
7. $f(x)=\dfrac{x^2-64}{x}$
8. $f(x)=\dfrac{8x+7}{x^2-9}$
9. $f(x)=\dfrac{4x-6}{3x+12}$

For problem 10, create a graph that represents the given situation.

10. The average cost per unit for a furniture manufacturer to produce an end table depends on how many units are produced. The relationship can be modeled by the function $f(x)=\dfrac{4000}{x+50}$, in which $x$ is the number of units produced and $f(x)$ is the cost per unit.