**Determine whether each function is continuous at the given *x*-value(s). Justify using the continuity test. If discontinuous, identify the type of discontinuity as *infinite*, *jump*, or *removable*.**

**Use the graph of each function to describe its end behavior. Support the conjecture numerically.**

*f* (*x*) = $\frac{-6x}{3x - 5}$

*f*(*x*) **=** *x*2 **–** 4*x* **–** 5

**4.** *f*(*x*) = $\frac{x+1}{x^{3} + 3x + 2}$; at *x* = –1 and *x* = –2

**2.** *f*(*x*) = $\frac{x - 2}{x + 4}$; at *x* = –4

**1.** *f*(*x*) = $\frac{2}{3x^{2}}$; at *x* = –1

**Determine between which consecutive integers the real zeros of each function are located on the given interval.**

**9.** **ELECTRONICS** Ohm’s Law gives the relationship between resistance *R*, voltage *E*, and current *I* in a circuit as$R=\frac{E}{I}$. If the voltage remains constant but the current keeps increasing in the circuit, what happens to the resistance?

**Practice**

***Continuity, End Behavior, and Limits***

6***x***

1

***O***

**−**8

2

***y***

8 ***x***

4

***O***

**−**4

**−**8

4

***y***

*Glencoe Precalculus*

Chapter 1

**18**

**−**4

**−**8

**−**2

**−**4

1

8

**−**16

4

8

**8.**

**7.**

**6.** *g*(*x*) = *x*4 + 10*x* – 6; [–3, 2]

**5.** *f*(*x*) = *x*3 + 5*x*2 – 4; [–6, 2]

**3.** *f*(*x*) = *x*3 – 2*x* + 2; at *x* = 1

**1-3**

NAME DATE PERIOD



