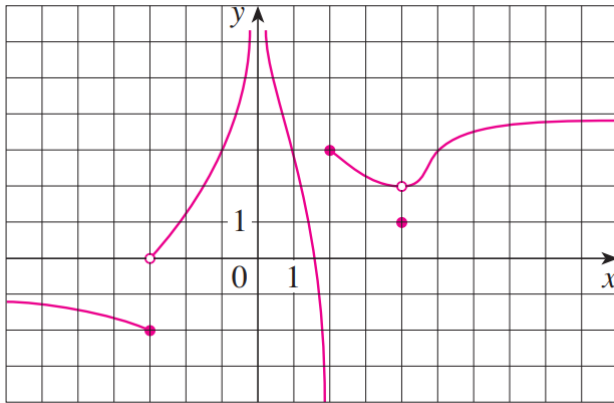


# PRECAL HONORS

Name \_\_\_\_\_

## UNIT 11 REVIEW



The graph of  $y = f(x)$  is shown above. Use this graph to answer questions 1 – 12.

1. Find  $\lim_{x \rightarrow -3^-} f(x)$ .
2. Find  $\lim_{x \rightarrow -3^+} f(x)$ .
3. Find  $\lim_{x \rightarrow -3} f(x)$ , if it exists.
4. Find  $f(-3)$ .
5. Find  $\lim_{x \rightarrow 4^-} f(x)$ .
6. Find  $\lim_{x \rightarrow 4^+} f(x)$ .
7. Find  $\lim_{x \rightarrow 4} f(x)$ , if it exists.
8. Find  $f(4)$ .
9. Find  $\lim_{x \rightarrow 0^+} f(x)$ .
10. Find  $\lim_{x \rightarrow 2^-} f(x)$ .
11. Find  $\lim_{x \rightarrow \infty} f(x)$ .
12. Find  $\lim_{x \rightarrow -\infty} f(x)$ .

	$x = 3.9$	$x = 3.99$	$x = 3.999$	$x = 4$	$x = 4.001$	$x = 4.01$	$x = 4.1$
$f(x)$	-1.9	-1.99	-1.999	-2	-2.999	-2.99	-2.9
$g(x)$	0.1	0.01	0.0001	dne	-0.0001	-0.01	-0.1

**Numeric information about functions  $f(x)$  and  $g(x)$  is given above.**

**Use this information to answer questions 13 – 19.**

13. Find  $\lim_{x \rightarrow 4^-} f(x)$ .
14. Find  $\lim_{x \rightarrow 4^+} f(x)$ .
15. Find  $\lim_{x \rightarrow 4} f(x)$ , if it exists.
16. Find  $f(4)$ .
17. Find  $\lim_{x \rightarrow 4^-} g(x)$ .
18. Find  $\lim_{x \rightarrow 4^+} g(x)$ .
19. Find  $\lim_{x \rightarrow 4} g(x)$ , if it exists.

**Evaluate each of the following limits.**

20.  $\lim_{x \rightarrow 0} \left( \frac{16}{x^2 + 4} \right)$
21.  $\lim_{x \rightarrow -1} \sqrt{1 - x}$
22.  $\lim_{x \rightarrow 1} \left( \frac{x^2 - 1}{x^2 + x - 2} \right)$
23.  $\lim_{x \rightarrow -4} \left( \frac{\frac{1}{4} + \frac{1}{x}}{x + 4} \right)$
24.  $\lim_{x \rightarrow 4} \left( \frac{x - 4}{\sqrt{x - 3} - 1} \right)$
25.  $\lim_{x \rightarrow \infty} \left( \frac{9x}{x^2 + 9} \right)$
26.  $\lim_{x \rightarrow \infty} \left( \frac{\sqrt{x^2 + 2}}{3x + 2} \right)$
27.  $\lim_{x \rightarrow -\infty} \left( \frac{x^3}{2x^4 - 3x^2} \right)$