UB 1.4 (3885577)

Current Score: 0/29

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Points	0/1	0/1	0/1	0/2	0/4	0/4	0/4	0/2	0/1	0/1	0/2	0/1	0/1	0/1	0/1	0/2	0/29

1. 0/1 points LarCalc9 1.4.010. [1245639]

Find the limit (if it exists). (If an answer does not exist, enter DNE.)

$$\lim_{x \to 6^+} \frac{6 - x}{x^2 - 36}$$

-1/12

2. 0/1 points LarCalc9 1.4.014. [1089603]

Find the limit (if it exists). (If an answer does not exist, enter DNE.)

$$\lim_{x \to 9^+} \frac{|x - 9|}{x - 9}$$

1

3. 0/1 points LarCalc9 1.4.018.MI. [1335315]

Find the limit (if it exists). (If an answer does not exist, enter DNE.)

$$\lim_{x \to 9} f(x), \text{ where } f(x) = \begin{cases} x^2 - 6x + 5 & \text{if } x < 9 \\ -x^2 + 6x + 59 & \text{if } x \geq 9 \end{cases}$$

32

4. 0/2 points LarCalc9 1.4.035. [1243553]

Consider the following.

$$f(x) = \frac{9}{x}$$

Find the x-value at which f is not continuous. Is the discontinuity removable? (Enter NONE in any unused answer blanks.)

0 ; ---Select--- nonremovable

5. 0/4 points LarCalc9 1.4.039. [1196794]

Consider the following.

$$f(x) = \frac{4}{1 - x^2}$$

Find the x-values at which f is not continuous. Which of the discontinuities are removable? (Enter your answers from smallest to largest. Enter NONE in any unused answer blanks.)

-1 ; ---Select--- nonremovable

1 ; ---Select--- nonremovable

6. 0/4 points LarCalc9 1.4.044.MI. [1335275]

Consider the following.

$$f(x) = \frac{x}{x^2 - 7}$$

Find the x-values at which f is not continuous. Which of the discontinuities are removable? (Enter your answers from smallest to largest. Enter NONE in any unused answer blanks.)

$-7^{\frac{1}{2}}$; ---Select--- nonremovable

$7^{\frac{1}{2}}$; ---Select--- nonremovable

7. 0/4 points LarCalc9 1.4.048. [1196563]

Consider the following.

$$f(x) = \frac{x - 5}{x^2 + 3x - 40}$$

Find the x-values at which f is not continuous. Which of the discontinuities are removable? (Enter your answers from smallest to largest. Enter NONE in any unused answer blanks.)

-8 ; ---Select--- nonremovable

5 ; ---Select--- removable

8. 0/2 points LarCalc9 1.4.054.MI. [1385876]

Consider the following.

$$f(x) = \begin{cases} -5x, & x \le 2 \\ x^2 - 8x + 5, & x > 2 \end{cases}$$

Find the x-value at which f is not continuous. Is the discontinuity removable? (Enter NONE in any unused answer blanks.)

$x =$ 2 ; ---Select--- nonremovable

9. 0/1 points LarCalc9 1.4.063. [1404233]

Find the constant a such that the function is continuous on the entire real line.

$$f(x) = \begin{cases} 5x^2, & x \ge 1 \\ ax - 6, & x < 1 \end{cases}$$

$a =$ 11

10. 0/1 points LarCalc9 1.4.066. [1245626]

Find the constant a such that the function is continuous on the entire real line.

$$g(x) = \begin{cases} \frac{2\sin x}{x} & \text{if } x < 0 \\ a - 7x & \text{if } x \ge 0 \end{cases}$$

$a =$ 2

11. 0/2 points LarCalc9 1.4.067. [1083763]

Find the constants *a* and *b* such that the function is continuous on the entire real line.

$$f(x) = \begin{cases} 7, & x \le -3 \\ ax + b, & -3 < x < 4 \\ -7, & x \ge 4 \end{cases}$$

a = -2

b = 1

12. 0/1 points LarCalc9 1.4.068. [1083817]

Consider the following.

$$g(x) = \begin{cases} \frac{x^2 - a^2}{x - a} & \text{if } x \neq a \\ 6 & \text{if } x = a \end{cases}$$

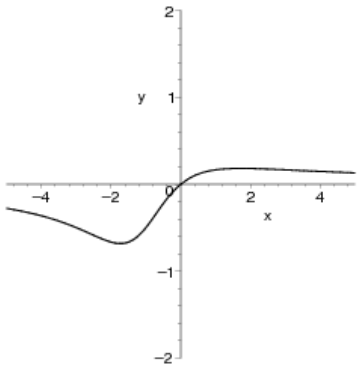
Find the constant *a* such that the function is continuous on the entire real line.

a = 3

13. 0/1 points LarCalc9 1.4.077. [1083781]

Describe the interval on which the function below is continuous.

$$f(x) = \frac{x}{x^2 + 2x + 3}$$

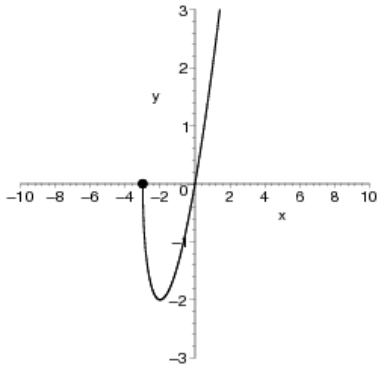


- [2, ∞)
- (−∞, 2)
- (2, 3)
- [2, 3)
- (−∞, ∞)

14. 0/1 points LarCalc9 1.4.078. [1083795]

Describe the interval on which the function below is continuous.

$f(x) = x\sqrt{x + 3}$



- [-3, ∞)
- [3, ∞)
- (3, ∞)
- (-∞, ∞)
- (-3, ∞)

15. 0/1 points LarCalc9 1.4.091. [1083813]

Verify that the Intermediate Value Theorem applies to the indicated interval and find the value of c guaranteed by the theorem.

$f(x) = x^2 + 2x + 1, \quad [0, 5], \quad f(c) = 16$

$c =$ [ ] 3

16. 0/2 points LarCalc9 1.4.115. [1196721]

Find all values of c such that f is continuous on (-∞, ∞).

$$f(x) = \begin{cases} 5 - x^2, & x \le c \\ x, & x > c \end{cases}$$

$c =$ $-\frac{1}{2} - \frac{\sqrt{21}}{2}$ (smaller value)

$c =$ $-\frac{1}{2} + \frac{\sqrt{21}}{2}$ (larger value)

Assignment Details