

UB 1.3 (3885610)

Current Score: 0/40

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
Points	0/1	0/1	0/1	0/1	0/3	0/1	0/1	0/4	0/4	0/3	0/3	0/2	0/1	0/4	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/40

1. 0/1 points

LarCalc9 1.3.005. [1083789]

Find the limit.

$$\lim_{x \rightarrow -5} x^3$$

2. 0/1 points

LarCalc9 1.3.013. [1083814]

Find the limit.

$$\lim_{x \rightarrow 0} \sqrt{x+1}$$

3. 0/1 points

LarCalc9 1.3.014. [1083792]

Find the limit.

$$\lim_{x \rightarrow 81} \sqrt[3]{x+41}$$

4. 0/1 points

LarCalc9 1.3.017. [1083793]

Find the limit.

$$\lim_{x \rightarrow 8} \frac{1}{x}$$

5. 0/3 points

LarCalc9 1.3.024. [1245536]

Find the limits.

$$f(x) = x + 1 \quad g(x) = x^2$$

(a)  $\lim_{x \rightarrow 1} f(x) =$

(b)  $\lim_{x \rightarrow 5} g(x) =$

(c)  $\lim_{x \rightarrow 1} g(f(x)) =$

6. 0/1 points

LarCalc9 1.3.028. [1083796]

Find the limit of the trigonometric function.

$$\lim_{x \rightarrow 0} 5 \tan(x)$$

7. 0/1 points

LarCalc9 1.3.032. [1083811]

Find the limit of the trigonometric function.

$$\lim_{x \rightarrow \pi} \cos(6x)$$

8. 0/4 points

LarCalc9 1.3.038. [1083770]

Consider the following information.

$$\lim_{x \rightarrow c} f(x) = \frac{8}{7}$$

$$\lim_{x \rightarrow c} g(x) = \frac{6}{7}$$

Use the information to evaluate the limits.

(a)  $\lim_{x \rightarrow c} [4f(x)]$

(b)  $\lim_{x \rightarrow c} [f(x) + g(x)]$

(c)  $\lim_{x \rightarrow c} [f(x)g(x)]$

(d)  $\lim_{x \rightarrow c} \frac{f(x)}{g(x)}$

9. 0/4 points

LarCalc9 1.3.040. [1241224]

Consider the following information.

$$\lim_{x \rightarrow c} f(x) = 64$$

Use the information to evaluate the limits.

(a)  $\lim_{x \rightarrow c} \sqrt[3]{f(x)}$

(b)  $\lim_{x \rightarrow c} \frac{f(x)}{48}$

(c)  $\lim_{x \rightarrow c} [f(x)]^2$

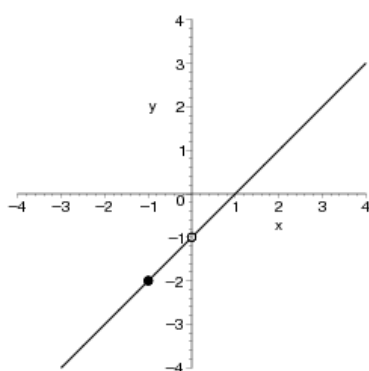
(d)  $\lim_{x \rightarrow c} [f(x)]^{2/3}$

10. 0/3 points

LarCalc9 1.3.041. [1196903]

Consider the following function and its graph.

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



Use the graph to determine the limit visually (if it exists). (If an answer does not exist, enter DNE.)

(a)  $\lim_{x \rightarrow 0} g(x)$

(b)  $\lim_{x \rightarrow -1} g(x)$

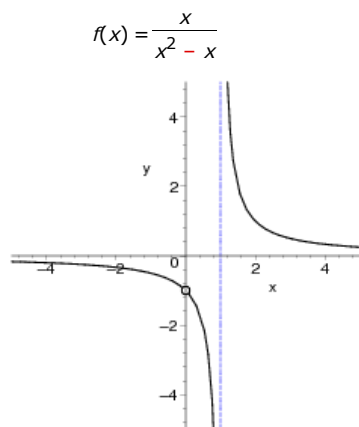
Write a simpler function that agrees with the given function at all but one point.

$$g_2(x) =$$

11. 0/3 points

LarCalc9 1.3.044. [1245538]

Consider the following function and its graph.



Use the graph to determine the limit visually (if it exists). (If an answer does not exist, enter DNE.)

(a)  $\lim_{x \rightarrow 1} f(x)$

(b)  $\lim_{x \rightarrow 0} f(x)$

Write a simpler function that agrees with the given function at all but one point.

$$g(x) =$$

12. 0/2 points

LarCalc9 1.3.046. [1245686]

Consider the following.

$$\lim_{x \rightarrow -1} \frac{2x^2 - 6x - 8}{x + 1}$$

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

Write a simpler function that agrees with the given function at all but one point.

$$g(x) =$$

13. 0/1 points

LarCalc9 1.3.049. [1083771]

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

$$\lim_{x \rightarrow 0} \frac{x}{x^2 - 7x}$$

14. 0/4 points

LarCalc9 1.3.051. [1083756]

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

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

**STEP 1:** Factor the denominator.

$$\lim_{x \rightarrow 6} \frac{x - 6}{(x + \boxed{\phantom{00}})(x - \boxed{\phantom{00}})}$$

**STEP 2:** Simplify.

$$\lim_{x \rightarrow 6} \frac{1}{x + \boxed{\phantom{00}}}$$

**STEP 3:** Use your result from Step 2 to find the limit.

$$\lim_{x \rightarrow 6} \frac{x - 6}{x^2 - 36} = \boxed{\phantom{00}}$$

15. 0/1 points

LarCalc9 1.3.052.MI. [1242773]

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

$$\lim_{x \rightarrow 9} \frac{9 - x}{x^2 - 81}$$

16. 0/1 points

LarCalc9 1.3.053. [1083791]

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

$$\lim_{t \rightarrow 5} \frac{t^2 + 2t - 35}{t^2 - 25}$$

17. 0/1 points

LarCalc9 1.3.056. [1083799]

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

$$\lim_{x \rightarrow 3} \frac{\sqrt{x+1} - 2}{x - 3}$$

18. 0/1 points

LarCalc9 1.3.061. [1241197]

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

$$\lim_{\Delta x \rightarrow 0} \frac{6(x + \Delta x) - 6x}{\Delta x}$$

19. 0/1 points

LarCalc9 1.3.063. [1196882]

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

$$\lim_{\Delta t \rightarrow 0} \frac{(t + \Delta t)^2 - 9(t + \Delta t) + 5 - (t^2 - 9t + 5)}{\Delta t}$$

20. 0/1 points

LarCalc9 1.3.068. [1083804]

Determine the limit of the trigonometric function (if it exists). (If an answer does not exist, enter DNE.)

$$\lim_{\theta \rightarrow 0} \frac{\cos(5\theta) \tan(5\theta)}{\theta}$$

21. 0/1 points

LarCalc9 1.3.077. [1196602]

Use a graphing utility to graph the function and estimate the limit. Use a table to reinforce your conclusion. Then find the limit by analytic methods. (You may round your answer to three decimal places.)

$$\lim_{x \rightarrow 0} \frac{\sqrt{x+3} - \sqrt{3}}{x}$$

22. 0/1 points

LarCalc9 1.3.085. [1197091]

Consider the following function.

$$f(x) = 9x + 7$$

Find the limit.

$$\lim_{\Delta x \rightarrow 0} \frac{f(x + \Delta x) - f(x)}{\Delta x}$$

23. 0/1 points

LarCalc9 1.3.088.MI. [1385853]

Consider the following function.

$$f(x) = 4x^2 - 6x$$

Find the limit.

$$\lim_{\Delta x \rightarrow 0} \frac{f(x + \Delta x) - f(x)}{\Delta x}$$

24. 0/1 points

LarCalc9 1.3.103. [1083758]

Use the position function  $s(t) = -16t^2 + 500$ , which gives the height (in feet) of an object that has fallen for  $t$  seconds from a height of 500 feet. The velocity at time  $t = a$  seconds is given by the following.

$$\lim_{t \rightarrow a} \frac{s(a) - s(t)}{a - t}$$

If a construction worker drops a wrench from a height of 500 feet, how fast will the wrench be falling after 1 second?

 ft/s

## Assignment Details

Name (AID): **UB 1.3 (3885610)**Submissions Allowed: **5**Category: **Homework**

Code:

Locked: **No**Author: **Goldsworthy, William** ( [bgoldsworthy@soroschool.org](mailto:bgoldsworthy@soroschool.org) )Last Saved: **Jun 25, 2013 07:35 PM EDT**Permission: **Protected**Randomization: **Person**Which graded: **Last****Feedback Settings**

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