

UB2

Current Score: 0/37

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

1. 0/7 points

LarCalc9 1.2.001. [1096623]

Consider the following limit.

$$\lim_{x \rightarrow 2} \frac{x - 2}{x^2 - 20x + 36}$$

Complete the table. (Round your answers to four decimal places.)

$x$	1.9	1.99	1.999	2	2.001	2.01	2.1
$f(x)$	<input type="text" value="-0.0621"/>	<input type="text" value="-0.0625"/>	<input type="text" value="-0.0625"/>	?	<input type="text" value="-0.0625"/>	<input type="text" value="-0.0625"/>	<input type="text" value="-0.0629"/>

Use the result to estimate the limit. (If you need to use  $\infty$  or  $-\infty$ , enter INFINITY or -INFINITY, respectively. If an answer does not exist, enter DNE.)

2. 0/7 points

LarCalc9 1.2.007. [1241226]

Consider the following limit.

$$\lim_{x \rightarrow 0} \frac{4 \sin(x)}{x}$$

Complete the table below. (Round your answers to five decimal places.)

$x$	-0.1	-0.01	-0.001	0.001	0.
$f(x)$	<input type="text" value="3.99334"/>	<input type="text" value="3.99993"/>	<input type="text" value="4.00000"/>	<input type="text" value="4.00000"/>	

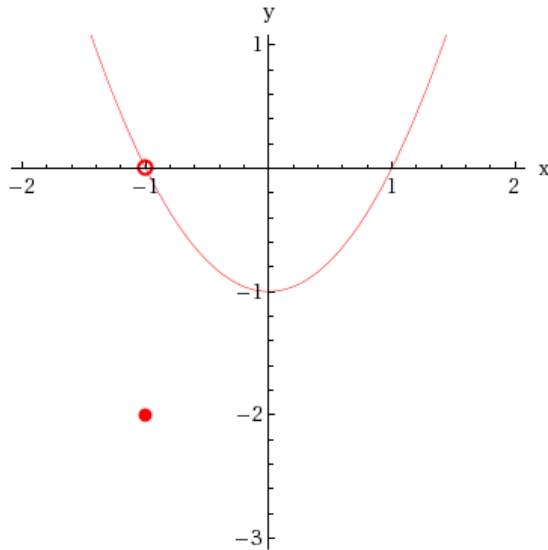
Use the table to estimate the limit. Use a graphing utility to graph the function to confirm your result. (Round your answer to five decimal places.)

3. 0/1 points

LarCalc9 1.2.018. [1245622]

Consider the following.

$$f(x) = \begin{cases} x^2 - 1 & \text{if } x \neq -1 \\ -2 & \text{if } x = -1 \end{cases}$$



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

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

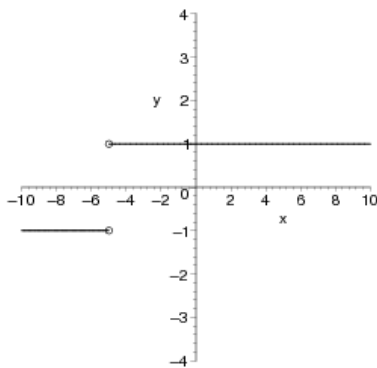
 

4. 0/1 points

LarCalc9 1.2.019. [1083769]

Consider the following.

$$\lim_{x \rightarrow -5} \frac{|x + 5|}{x + 5}$$



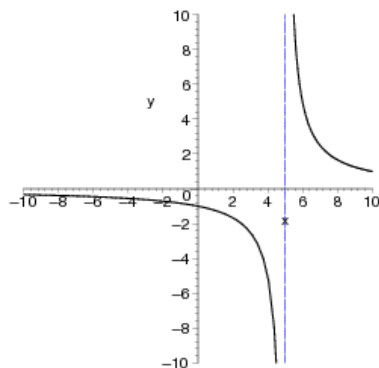
Use the graph to find the limit (if it exists). (If an answer does not exist, enter DNE.)

5. 0/1 points


LarCalc9 1.2.020. [1083807]

Consider the following.

$$\lim_{x \rightarrow 5} \frac{5}{x - 5}$$



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

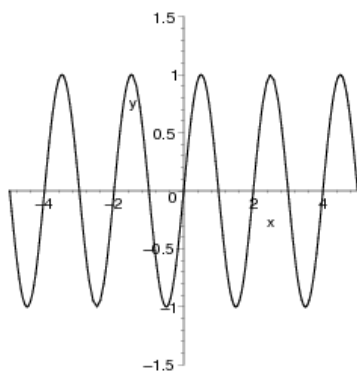
 

6. 0/1 points


LarCalc9 1.2.021. [1083772]

Consider the following.

$$\lim_{x \rightarrow -4} \sin(\pi x)$$



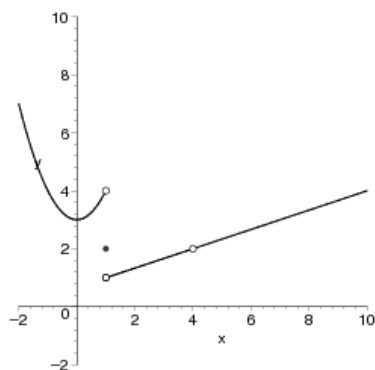
Use the graph to find the limit (if it exists). (If an answer does not exist, enter DNE.)

7. 0/4 points

LarCalc9 1.2.025. [1083802]

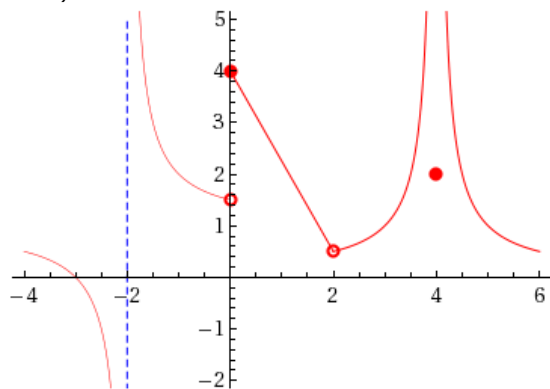
Use the graph of the function  $f$  to decide whether the value of the given quantity exists. If it does, find it. If it does not, enter DNE.

(a)  $f(1)$  2(b)  $\lim_{x \rightarrow 1} f(x)$  DNE(c)  $f(4)$  DNE(d)  $\lim_{x \rightarrow 4} f(x)$  2

8. 0/8 points

LarCalc9 1.2.026. [1267766]

Use the graph of the function  $f$  to decide whether the value of the given quantity exists. (If an answer does not exist, enter DNE.)



(a)  $f(-2)$

 DNE

(b)  $\lim_{x \rightarrow -2} f(x)$

 DNE

(c)  $f(0)$

 4

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

 DNE

(e)  $f(2)$

 DNE

(f)  $\lim_{x \rightarrow 2} f(x)$

 .5

(g)  $f(4)$

 2

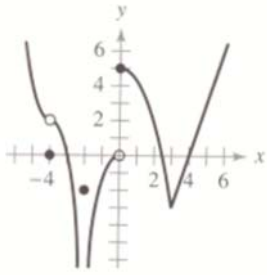
(h)  $\lim_{x \rightarrow 4} f(x)$

 DNE

9. 0/1 points

LarCalc9 1.2.028. [1083790]

Use the graph of the function  $f$  to identify the values of  $c$  for which  $\lim_{x \rightarrow c} f(x)$  exists.



- $c \neq -4, -2$
- $c \neq -2, 0$
- $\mathbb{R}$
- $c \neq -4, -2, 0, 3$
- $c \neq -4, 0, 3$

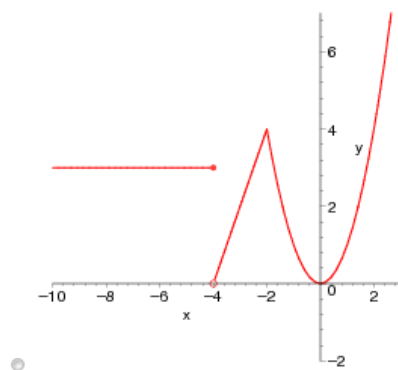
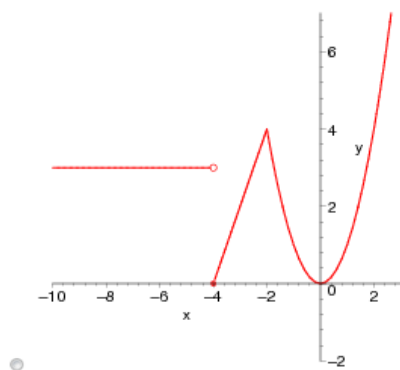
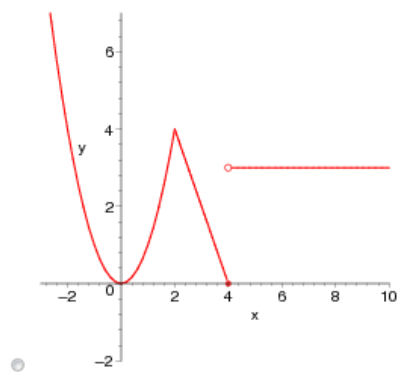
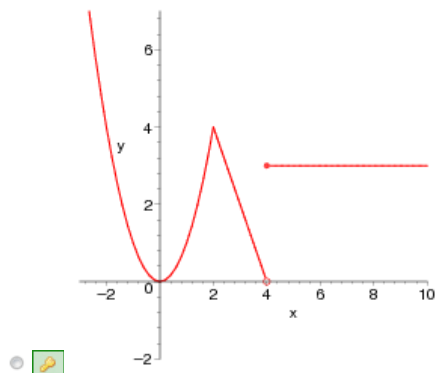
10. 0/2 points

LarCalc9 1.2.029.MI. [1267874]

Consider the following.

$$f(x) = \begin{cases} x^2, & x \leq 2 \\ 8 - 2x, & 2 < x < 4 \\ 3, & x \geq 4 \end{cases}$$

Sketch the graph of  $f$ .



Identify the values of  $c$  for which the following limit exists.

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

- The limit exists at all points on the graph.
- The limit exists at all points on the graph except where  $c = 2$  and  $c = 4$ .
- The limit exists at all points on the graph except where  $c = 2$ .
- The limit exists at all points on the graph except where  $c = 4$ .

11. 0/1 points

LarCalc9 1.2.031. [1083775]

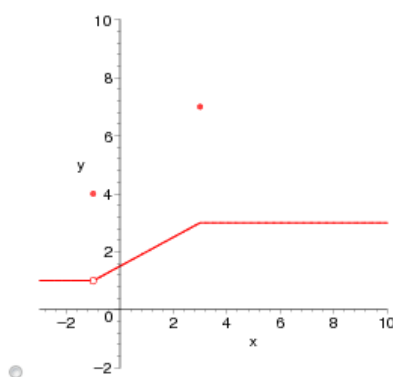
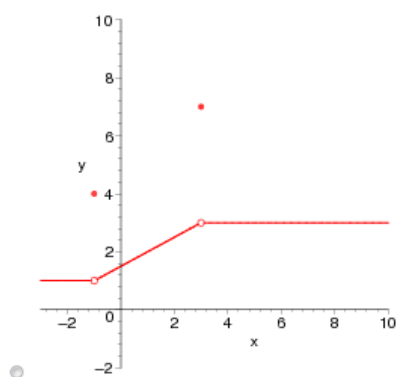
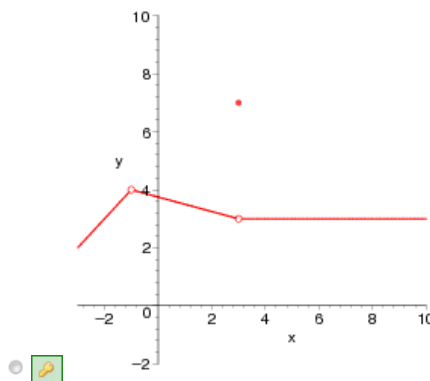
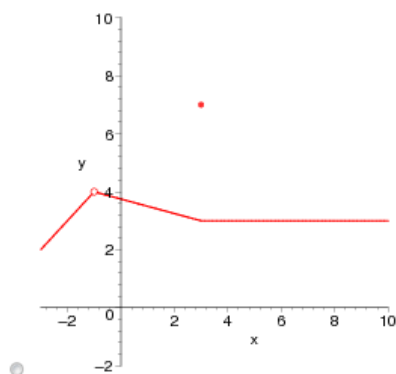
Sketch a graph of a function  $f$  that satisfies the given values.

$f(-1)$  is undefined.

$\lim_{x \rightarrow -1} f(x) = 4$

$f(3) = 7$

$\lim_{x \rightarrow 3} f(x) = 3$



12. 0/1 points

LarCalc9 1.2.043. [1083788]

Find the limit  $L$ . Then use the  $\epsilon$ - $\delta$  definition to prove that the limit is  $L$ .

$\lim_{x \rightarrow 2} (x + 8)$

$L =$   10

13. 0/1 points

LarCalc9 1.2.044. [1241214]

Find the limit  $L$ . Then use the  $\epsilon$ - $\delta$  definition to prove that the limit is  $L$ .

$\lim_{x \rightarrow -2} (8x + 1)$

$L =$   -15




14. 0/1 points

LarCalc9 1.2.050. [2143018]

Find the limit  $L$ . Then use the  $\varepsilon$ - $\delta$  definition to prove that the limit is  $L$ .

$$\lim_{x \rightarrow 49} \sqrt{x}$$

$L =$    7

## Assignment Details

Name (AID): **UB2**Submissions Allowed: **5**Category: **Homework**

Code:

Locked: **No**Author: **Goldsworthy, William** ( [bgoldsworthy@soroschool.org](mailto:bgoldsworthy@soroschool.org) )

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