

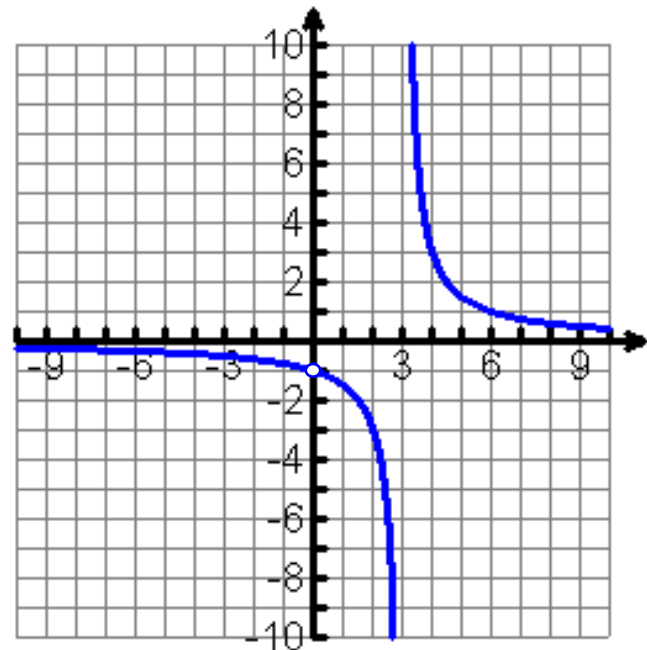
Name:

MA 181 Calculus I (Scott)

**Chapter 2: Section 2.2: The Limit of a Function
(20 points)**

Enter the function $f(x) = \frac{3x}{x^2 - 3x}$ as y_1 on your calculator. On the **TBLSET** menu, set the independent variable to **ASK**. Go to the **TABLE** and use your calculator to help you complete the following tables.

Round to four decimal places.



(a)

x	y_1
1	
0.1	
0.01	
0.001	

x	y_1
-1	
-0.1	
-0.01	
-0.001	

Conclusion: As $x \rightarrow 0$, $f(x) \rightarrow \underline{\hspace{2cm}}$

(b)

x	y_1
6.2	
6.1	
6.05	
6.002	
6.0001	

x	y_1
5.8	
5.85	
5.9	
5.96	
5.999	

Conclusion: As $x \rightarrow 6$, $f(x) \rightarrow \underline{\hspace{2cm}}$

(c)

x	y_1
2	
2.9	
2.99	
2.999	

x	y_1
4	
3.1	
3.01	
3.001	

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**Chapter 2: Section 2.2: The Limit of a Function
(20 points)**

Definition: The Limit of a Function (page 95)

Definition: One Sided Limits (page 100)

Note: The limit at a function a does not depend on the function value at a even if that function value, $f(a)$, exists. That is, whether or not a limit exists at a has nothing to do with the function value $f(a)$.