

3 Strikes Yer Out!

1ST TRY... 3 POINTS
2ND TRY... 2 POINTS
3RD TRY... High five!

Worksheet A - 2.1



Group Members:

1. $\lim_{x \rightarrow -2} \frac{x^2 + 1}{3x^2 - 2x + 5}$

2. $\lim_{x \rightarrow 0} \frac{\sin 2x}{3x}$

3. $\lim_{x \rightarrow 0} (e^x \sin x)$

4. $\lim_{x \rightarrow 1} \frac{x^2 - 1}{2x^2 - x - 1}$

5. $\lim_{x \rightarrow 0} \frac{\tan x}{x}$

6. $\lim_{x \rightarrow 4} \sqrt{1 - 2x}$

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Worksheet B - 2.2



Group Members:

1. $\lim_{x \rightarrow -\infty} \frac{2x^2 + 3}{5x^2 + 7}$

2. $\lim_{x \rightarrow \infty} \frac{x}{e^x}$

3. $\lim_{x \rightarrow \infty} \frac{x^3 - 4x^2 + 3x + 3}{x - 3}$

4. $\lim_{x \rightarrow -\infty} \frac{5 - x^4}{x^3 + 2}$

5. Find the vertical asymptote(s) and use limits to describe the behavior to the left and right of the asymptote(s).

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

6. Find a right and left end behavior model for the function.

$$f(x) = -3x + e^x$$

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Worksheet C - 2.3



Group Members:

1. What are the 4 different types of discontinuity?

2. Find all discontinuities of the function and give what type each is:

$$f(x) = \frac{5x^2 - 13x - 6}{3x^2 - 5x - 12}$$

3. Is the function continuous or not? Explain why or why not.

$$f(x) = \begin{cases} x^2 + 5, & x \geq 1 \\ 12x - 5, & x < 1 \end{cases}$$

4. Find the value(s) of "c" such that f(x) is continuous at x=2.

$$f(x) = \begin{cases} c^2x + 5, & x \geq 2 \\ x + 8, & x < 2 \end{cases}$$

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3RD TRY... High five!

Worksheet D - 2.4



Group Members:

1. Find the average rate of change of $f(x) = x^3 + 2$ over $[2, 5]$.

2. Find the slope of the curve $f(x) = \frac{1}{1-x}$ at $x = 4$.

3. Find the equation of the normal line of $f(x) = x^2 + 3x + 5$ at $x = -2$.

Names:

Worksheet	1 st Attempt – 3 points	2 nd Attempt – 2 points	3 rd Attempt – HIGH FIVE!
A			
B			
C			
D			
Total Points			

3 Strikes Yer Out Rules

- 1) Each worksheet has 3-6 problems. After you are done, bring up the one you finished for grading.
- 2) You must *work together* so that each group member is at the same pace.

****Note: Hitchhiking is illegal in Calculus!!****

- 3) When your **whole group** is finished with the worksheet, one person should bring **ALL** worksheets to check with me. Bring your *score sheet* with you!!

4) Scoring:

- If your group gets **ALL** problems correct the first time, you will receive 3 points (to be written on the score sheet).
- Otherwise, you will have to take your sheet, go back, and correct them....on the second time, you will receive 2 points.
-on the third time...it's a HIGH FIVE FOR YOU!!

Good Luck!!