

Last name: _____

First name: _____

Section: _____

Question:	1	2	Total
Points:	10	10	20
Score:			

Instructions: You must answer all the questions below and give your solutions to the TA at the end of the recitation. Write your solutions directly on the worksheet. Late worksheet will not be accepted.

QUESTION 1 (10 pts)

Find the value of the following limit. If the limit doesn't exist, explain why.

(a) (5 points) $\lim_{x \rightarrow -2} \frac{2 - |x|}{2 + x}$.

(b) (5 points) $\lim_{x \rightarrow 0} \sqrt{x^4 + x^2} \sin\left(\frac{\pi}{x}\right)$.

QUESTION 2

(10 pts)

Say if the function in the limit is continuous at the point a . Then use this information to find the following limits.

(a) (5 points) $a = 0$ and $\lim_{x \rightarrow 0} \cos(x)$.

(b) (5 points) $a = \pi/4$ and $\lim_{x \rightarrow \pi/4} x^2 \tan(x)$.