

Name : _____

140 - Calculus I: Test 1 Extra Credit

DIRECTIONS: Show all work! There is a total of 5 points which will be added to Test 1.

1. (3 points) Find all discontinuities for $f(x)$. Then determine what kind of discontinuities they are.

$$f(x) = \frac{x^2 + 4x - 21}{x^2 + 8x + 7}$$

2. (2 points) Consider the limit below:

$$\lim_{x \rightarrow -4} 2x + 5 = -3$$

Given $\epsilon > 0$, what would be an appropriate choice for δ when proving the above limit.
[Hint: δ is given as a function of ϵ]