

MTH 1125 (2pm Class) - Test #1

FALL 2018

Pat Rossi

Name _____

Instructions Show CLEARLY how you arrive at you answers!

1. Compute: $\lim_{x \rightarrow 3} \frac{x^2 + 2x + 12}{x^2 + 6x - 12} =$

2. Compute: $\lim_{x \rightarrow 6} \frac{x^2 - 5x - 6}{x^2 - 9x + 18} =$

3. Compute: $\lim_{x \rightarrow 2} \frac{x^2 + 4x - 9}{x^2 + 2x - 8} =$

4. Compute: $\lim_{x \rightarrow -\infty} \frac{3x^7 + 4x^3 - 5}{x^4 + 4x^3 - 8x} =$

5. $f(x) = \frac{x^2-9}{x^2+3x-10}$ Find the asymptotes and graph

6. Compute: $\lim_{x \rightarrow 1} \frac{\sqrt{x+3}-2}{x-1} =$

(a)

$x =$	$f(x) =$	$x =$	$f(x) =$
-2.5	3.6	-1.5	3.6
-2.1	3.8	-1.9	3.8
-2.01	3.9	-1.99	3.9
-2.001	3.99	-1.999	3.99
-2.0001	3.999	-1.9999	3.999

Based on the information in the table above, do the following:

(a) $\lim_{x \rightarrow -2^-} f(x) =$

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

(c) Graph $f(x)$

Extra: (Wow! 10 points) Show CLEARLY how you arrive at your answer!

Compute: $\lim_{x \rightarrow -\infty} \frac{2x+5}{\sqrt{x^2+4x+4}} =$