MTH 1125 Test #1 - (12 pm class)

FALL 2019

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Instructions.   Show CLEARLY how you arrive at your answers.

1. Compute: $\lim_{x \to 2} \frac{2x^2+x+4}{x^2+5x-7} =$

2. Compute: $\lim_{x \to 6} \frac{x^2-8x+12}{x^2-4x-12} =$

3. Compute: $\lim_{x \to 3} \frac{x^2+4x-9}{x^2-x-6} =$

4. Compute: $\lim_{x \to -\infty} \frac{x^4+6x^3-5}{3x^6+7x^2-8x} =$

5. $f(x) = \frac{x^2+x-20}{x^2-9}$ Find the asymptotes and graph

6. Compute: $\lim_{x \to 9} \frac{\sqrt{x-5}-2}{x-9} =$

7.

$x =$	$f(x) =$	$x =$	$f(x) =$
-2.5	3.6	-1.5	-3.6
-2.1	30.8	-1.9	-30.8
-2.01	318.9	-1.99	-318.9
-2.001	$3,241.9$	-1.999	$-3,241.9$
-2.0001	$35,342.2$	-1.9999	$-35,342.2$

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

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

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

(c) Graph $f(x)$

8. Determine whether or not $f(x)$ is continuous at the point $x = 2$.

$$f(x) = \begin{cases} 2x + 2 & \text{for } x < 2 \\ 6 & \text{for } x = 2 \\ 5x - 4 & \text{for } x > 2 \end{cases}$$