

MTH 1125 Test #1 - (12 pm class)

FALL 2021

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Name _____

Instructions. Show CLEARLY how you arrive at your answers.

1. Compute: $\lim_{x \rightarrow -2} \frac{x^2+4x-8}{x^2+x+5} =$

2. Compute: $\lim_{x \rightarrow 3} \frac{x^2-8x+15}{x^2-7x+12} =$

3. Compute: $\lim_{x \rightarrow -2} \frac{x^2+5x-9}{x^2-2x-8} =$

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

5. $f(x) = \frac{x^2 - 2x - 3}{x^2 - 4}$ Find the asymptotes and graph

6. Compute: $\lim_{x \rightarrow 5} \frac{\sqrt{x-1}-2}{x-5} =$

7.

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

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

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

(b) $\lim_{x \rightarrow +\infty} f(x) =$

(c) Graph $f(x)$

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

$$f(x) = \begin{cases} 5x - 3 & \text{for } x < 2 \\ 6 & \text{for } x = 2 \\ x^2 + 3 & \text{for } x > 2 \end{cases}$$