

MTH 1125 Test #1 - (9 am class)

FALL 2017

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Name _____

Instructions. Show CLEARLY how you arrive at your answers.

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

2. Compute: $\lim_{x \rightarrow -1} \frac{x^2 - 2x - 3}{x^2 - 5x - 6} =$

3. Compute: $\lim_{x \rightarrow 2} \frac{x^2 - 2x - 15}{x^2 + 4x - 12} =$

4. Compute: $\lim_{x \rightarrow -\infty} \frac{9x^3 + 4x - 5}{x^4 + 4x^3 - 8x} =$

5. $f(x) = \frac{x^2+4x+3}{x^2-3x-10}$ Find the asymptotes and graph

6. Compute: $\lim_{x \rightarrow 1} \frac{\sqrt{x+24}-5}{x-1} =$

7.

| $x =$ | $f(x) =$ | $x =$ | $f(x) =$ |
|-----------|----------|----------|----------|
| | | | |
| -9.1 | 1.5 | 9.1 | 2.5 |
| -90.8 | 1.9 | 90.8 | 2.1 |
| -900.3 | 1.99 | 900.3 | 2.01 |
| -9,000.3 | 1.999 | 9,000.3 | 2.001 |
| -90,000.9 | 1.9999 | 90,000.9 | 2.0001 |

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

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

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

(c) Graph $f(x)$