Limits

Name _____ Date _____

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

2. $\lim_{x \to \infty} \frac{3x - 5}{x - 6} =$ _____

3. $\lim_{x \to \infty} \frac{-9x - 2}{5x^2 - 9x} =$ _____

4. $\lim_{x \to \infty} \frac{x + 9}{9x^2 + 3x - 7} =$ _____

5. $\lim_{x \to 1} 3x^2 - 3x + 7 =$ _____

6. $\lim_{x \to 5} \frac{x^2 - x - 20}{x - 5} =$ _____

7. $\lim_{x \to 2} \frac{x^2 - 5x + 6}{x - 2} =$ _____

8. $\lim_{x \to -5} \frac{x^2 + 11x + 30}{x + 5} =$ _____

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

10. $\lim_{x \to \infty} \frac{x^3 + x^2 + 6x - 2}{7x^3 - 3x^2 - 3x - 9} =$ _____

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11. $\lim_{x \to \infty} \frac{x^3 + x^2 + 4}{6x^4 - 8x^3 + 4x^2 + 5x + 1} =$ _____

12. $\lim_{x \to \infty} \frac{x^2 - 8x + 6}{5x^2 - 6x - 6} =$ _____

13. $\lim_{x \to 3} \frac{x^2 - 2x - 3}{x - 3} =$ _____

14. $\lim_{x \to \infty} \frac{-8x^3 + 9x^2 - 2x - 1}{2x^4 - 3x^3 - 9x^2 + 5x - 6} =$ _____

15. $\lim_{x \to -4} \frac{x^2 + 7x + 12}{x + 4} =$ _____

16. $\lim_{x \to -3} -3x^2 - 2x + 6 =$ _____

17. $\lim_{x \to \infty} \frac{4x^3 - 6x^2 + 3x - 8}{2x^3 + 8x^2 + 6x - 3} =$ _____

18. $\lim_{x \to \infty} \frac{3x^3 - x^2 - 4x + 1}{4x^3 + 9x^2 + 5x + 3} =$ _____

19. $\lim_{x \to \infty} \frac{9x^2 + 6x}{7x^2 - 4x + 6} =$ _____

20. $\lim_{x \to -2} \frac{x^2 + 6x + 8}{x + 2} =$ _____

21. $\lim_{x \to \infty} \frac{-8x^3 - 9x^2 - x + 8}{5x^3 - x^2 + 4x - 6} =$ _____

22. $\lim_{x \to -3} -2x^2 + 5x + 2 =$ _____