

Name _____

Limits Review **B**

Directions: Find the limit (if it exists).

1. $\lim_{x \rightarrow 2} (3x^2 + 5)$

3. $\lim_{x \rightarrow -1} \frac{x^2 + 3x + 2}{x^2 + 1}$

5. $\lim_{x \rightarrow -9} \frac{x^2 + 6x - 27}{x + 9}$

7. $\lim_{x \rightarrow 2} \frac{x - 2}{x^2 - 4}$

9. $\lim_{x \rightarrow 3} \frac{x + 2}{x^3 + 8}$

11. $\lim_{x \rightarrow 5} \frac{x^2 - 3x - 10}{x - 5}$

13. $\lim_{x \rightarrow 0} \frac{\sqrt{x+4} - 2}{x}$

15. $\lim_{x \rightarrow 0} \frac{\sqrt{x+9} - 3}{x}$

17. $\lim_{x \rightarrow 3} \sqrt{9 - x^2}$

19. $\lim_{x \rightarrow \infty} \frac{2x}{(x+2)^2}$

21. $\lim_{x \rightarrow \infty} \frac{4+x}{3}$

23. $\lim_{x \rightarrow \infty} \frac{3x+2}{x+1}$

25. $\lim_{x \rightarrow 3} \frac{x-3}{\sqrt{x^2-9}}$

2. $\lim_{x \rightarrow 4} \frac{x^2 - 5x + 4}{x - 4}$

4. $\lim_{x \rightarrow 1} \frac{x^2 - x - 2}{x - 3}$

6. $\lim_{x \rightarrow 1} \frac{1 - \sqrt{2x^2 - 1}}{x - 1}$

8. $\lim_{x \rightarrow 2} \frac{x - 2}{|x - 2|}$

10. $\lim_{x \rightarrow 1} \frac{x^2 + x - 2}{x - 1}$

12. $\lim_{t \rightarrow \infty} \frac{1}{2t} - \frac{t}{t+1}$

14. $\lim_{x \rightarrow \infty} \frac{3x+5}{4-3x}$

16. $\lim_{x \rightarrow \infty} \frac{x^2 + 2x}{3x^2 - 6x + 1}$

18. $\lim_{x \rightarrow -2} \frac{x^3 + 8}{x + 2}$

20. $\lim_{x \rightarrow 2^+} \frac{x}{\sqrt{x^2 - 4}}$

22. $\lim_{x \rightarrow 3} \frac{x - 3}{x^3 - 27}$

24. $\lim_{x \rightarrow \infty} \frac{4x^3 - 5x^2 - 1}{(x+2)^2}$
