

Lab Worksheet for November 18 , 2021

Practice with Limits involving infinity .

Compute the following limits.

1. $\lim_{x \rightarrow 0^+} \frac{2x+1}{x}$

2. $\lim_{x \rightarrow \infty} 3x + 2x^2$

3. $\lim_{x \rightarrow 1^-} \frac{\cos(x)}{x-1}$

$$4. \lim_{x \rightarrow 1^+} \frac{\cos(x)}{x-1}$$

$$5. \lim_{x \rightarrow \infty} \frac{x}{\sin(x)}$$

$$6. \lim_{x \rightarrow -\infty} \frac{2}{4x^2}$$

$$7. \lim_{x \rightarrow 1^+} \frac{2\sin(x)}{x-1}$$

$$8. \lim_{x \rightarrow -\infty} 245 + \frac{1}{x^2}$$

9. $\lim_{x \rightarrow 4^+} 3x + \frac{1}{\ln(x-4)}$

10. $\lim_{x \rightarrow 0} \frac{x}{\cos(x)}$

$$11. \lim_{x \rightarrow \infty} \frac{\sin(x)}{x}$$

$$12. \lim_{x \rightarrow 0^-} \frac{\cos(x)}{x}$$

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

$$14. \lim_{x \rightarrow -4^+} \frac{x^2 + 2x}{x^2 - 4}$$

$$15. \lim_{x \rightarrow -2^+} \frac{2x}{x^2 - x - 6}$$

$$16. \lim_{x \rightarrow -2^-} \frac{2x}{x^2 - x - 6}$$

$$17. \lim_{x \rightarrow 3^+} \frac{2x}{x^2 - x - 6}$$

$$18. \lim_{x \rightarrow 3^-} \frac{2x}{x^2 - x - 6}$$