

SECTION 2-3 (DAY 2)

Evaluate each limit. Show your work or explain your reasoning.

1. $\lim_{h \rightarrow 0} \frac{(-9 + h)^2 - 81}{h}$

2. $\lim_{t \rightarrow 8} (1 + \sqrt[3]{t})(2 - t^2)$

3. $\lim_{\theta \rightarrow 4} \frac{\theta^2 - 4\theta}{\theta^2 - \theta - 12}$

4. $\lim_{x \rightarrow 4} \frac{x^2}{x^2 - x - 12}$

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

6. Write $\frac{|x|}{x}$ as a piecewise-defined function.

$$\lim_{x \rightarrow 0^-} \frac{|x|}{x}$$

$$\lim_{x \rightarrow 0^+} \frac{|x|}{x}$$

7. $\lim_{x \rightarrow 0} \frac{|x|}{x}$

8. $\lim_{x \rightarrow 5^-} \frac{3x - 15}{|5 - x|}$

9. $\lim_{x \rightarrow \pi} \frac{2x}{\tan^2 x}$