

**Math 131 - Quiz 3**  
September 6, 2023

Name \_\_\_\_\_

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

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1. (10 points) Evaluate each limit analytically. Show all work.

(a)  $\lim_{x \rightarrow 2} \frac{x^3 - x^2 - 2x}{x^2 + 2x - 8}$

(b)  $\lim_{x \rightarrow 9} \frac{x - 9}{3 - \sqrt{x}}$

(c)  $\lim_{w \rightarrow -2} \frac{(w + 3)^2 - w^2 + 3}{w + 2}$