Name: _____

Answer the questions in the spaces provided on the following pages. If you run out of room for an answer, continue on the back of the page. Show **all** your work!

1. For the function $f(x) = \dfrac{8 - x^3}{x^2 - 4}$ evaluate $\lim\limits_{x \to 2} f(x)$ using a table

2. Evaluate $\lim\limits_{x \to 4} \dfrac{x^3 - 64}{x - 4}$

3. Evaluate $\lim\limits_{x \to 2} 2x^2 - 9x + 3$

4. Evaluate $\lim\limits_{x \to -9} \dfrac{x^2 - 3x - 108}{x^2 + 2x - 63}$

5. Evaluate $\lim_{x \to 2} \left(8 - 3x + 12x^2\right)$

6. Evaluate $\lim_{x \to -5} \dfrac{x^2 + 6x + 5}{x^2 + 2x - 15}$

7. Evaluate $\lim_{w \to -4} \dfrac{w^2 - 16}{(w - 2)(w + 3) - 6}$

8. Evaluate $\lim_{x \to -2} f(x)$ for the following function

$$f(x) = \begin{cases} \dfrac{1}{x-2} & \text{if } x \neq -2 \\ 123 & \text{if } x = -2 \end{cases}$$

9. Given the below graph of some function $g(x)$, evaluate the following

(a) $\lim_{x \to 0} g(x)$

(b) $\lim_{x \to -3} g(x)$

(c) $\lim_{x \to 1} g(x)$