

TUTORS: THIS IS A TAKE HOME QUIZ

Evaluate the following limits algebraically. Show all algebraic work.

[a] $\lim_{x \rightarrow 2} \frac{x^3 - 4x}{x^2 + x - 6}$

[b] $\lim_{x \rightarrow -1} \frac{x^3 - x}{x^2 - x - 2}$

[c] $\lim_{x \rightarrow 3} \frac{9 - 3x}{\sqrt{2x - 5} - 1}$

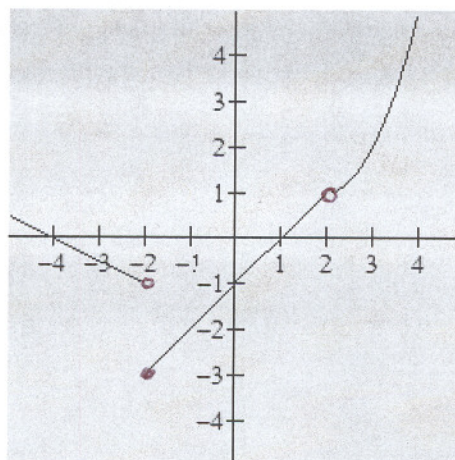
[d] $\lim_{x \rightarrow 1} \frac{4 - 4x}{\sqrt{3x + 1} - 2}$

[e] $\lim_{x \rightarrow -3} \frac{\frac{1}{x^2} - \frac{1}{9}}{x + 3}$

[f] $\lim_{x \rightarrow -2} \frac{\frac{1}{x^2} - \frac{1}{4}}{x + 2}$

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Evaluate the following for the function graphed below. If a value does not exist, write DNE.



[a] $\lim_{x \rightarrow -2^+} f(x)$ [b] $\lim_{x \rightarrow -2^-} f(x)$ [c] $\lim_{x \rightarrow -2} f(x)$ [d] $f(-2)$

[e] $\lim_{x \rightarrow 2^+} f(x)$ [f] $\lim_{x \rightarrow 2^-} f(x)$ [g] $\lim_{x \rightarrow 2} f(x)$ [h] $f(2)$

[i] $\lim_{x \rightarrow -1} f(x)$

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