

Name: _____

Date: _____

Learning Goal 2.1

Finite limits and continuity.

More Questions

1. Compute the value of the following limits.

a. $\lim_{x \rightarrow 1} \frac{x^2 + 2x - 3}{x - 1}$

c. $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1}$

e. $\lim_{x \rightarrow 1} \frac{x^2}{x(x - 1)}$

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

i. $\lim_{x \rightarrow 0} \frac{x}{\sqrt{x + 1} - 1}$

k. $\lim_{x \rightarrow 0} \frac{\cos x - 1}{x}$

m. $\lim_{x \rightarrow 0} \frac{\tan^3 2x}{x^2 \sin 7x}$

b. $\lim_{x \rightarrow -1} \frac{\sqrt{x + 5} - 2}{x + 1}$

d. $\lim_{x \rightarrow 0} \frac{x^3 - x^2}{x^2}$

f. $\lim_{x \rightarrow 1} \frac{x - 1}{\sqrt{x} - 1}$

h. $\lim_{x \rightarrow 1} \frac{x^3 - 3x + 2}{x^3 - x^2 - x + 1}$

j. $\lim_{x \rightarrow 1} \frac{\sqrt{x} - x^2}{1 - \sqrt{x}}$

l. $\lim_{x \rightarrow 0} \frac{\sin 5x \cos x}{x}$

n. $\lim_{x \rightarrow 0} x^3 \cos\left(\frac{1}{\sqrt{x}}\right)$

****tricky****