Name: _____ Date: _____

Learning Goal 2.1	Finite limits and continuity.

More Questions

1. What value of c will make the following function $f(x)$ continuous at 2?

$$f(x) = \begin{cases} \dfrac{x^2 - x - 2}{x - 2}, & x \neq 2 \\ c, & x = 2 \end{cases}$$

Theorem of Continuity of Function Composition
If g is continuous at a and f is continuous at $g(a)$ then the composition $f \circ g$ is continuous at a.

2. Determine where the following function are continuous.
   a. $h(x) = \cos(x^2)$ b. $h(x) = \ln(1 + \sin x)$

3. Show there are solutions to the following equations in the given intervals.
   a. $f(x) = \sqrt[3]{x} + x - 1$ $(0, 8)$ b. $g(x) = x^3 + 3x^2 + x - 2$ $(0, 1)$