CALCULUS I  
Spring, 2000

QUIZ 11

Directions. Show all work to receive credit.

1. Find the most general antiderivative of:

\[ f(x) = \sqrt{x} - \frac{1}{x^2} + \frac{1}{x} + 2 \]

\[ x^{\frac{3}{2}} - x^{-2} + \frac{1}{x} + 2 \]

\[ \int f(x) \, dx = C \]

\[ \frac{2}{3} x^{\frac{3}{2}} + \frac{1}{x} + \ln x + 2x + C \]

2. Find \( g(x) \), given that:

\[ g'(x) = \cos(x) \text{ and } g(\pi/2) = 3 \]

\[ g(x) = \sin x + 2 \]

\[ g(x) = \sin x + C \]

\[ g(\pi/2) = 1 + C = 3 \]

\[ C = 2 \]

-2 if C is wrong.
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QUIZ 11

Directions. Show all work to receive credit.

1. Find the most general antiderivative of:

\[ f(x) = x^{-1/3} - \frac{1}{x^2} + \frac{1}{x} + x \]

\[ \int f(x) \, dx = \frac{3}{2} x^{2/3} + \frac{1}{x} + \ln x + \frac{1}{2} x^2 + C \]

2. Find \( g(x) \), given that:

\( g'(x) = \sin x \) and \( g(0) = -2 \)

\[ g(x) = -\cos x - 1 \]

\[ g(x) = -\cos x + C \]

\[ g(0) = -1 + C = -2 \]

\[ C = -1 \]

\( \boxed{\text{calc is wrong}} \)