

Form #97429165328

Step-By-Step

AnswersSave this Test! / Turn Into a Puzzle or Board Game!

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Solve:

- 1) What is the derivative of
- $h(x) = \cot^{-1}(x + 4)$
- ? 2)

$$\boxed{\frac{-1}{1+(x+4)^2}} \text{ or } \frac{-1}{x^2 + 8x + 17}$$

- What is
- $\frac{d}{dx} \arctan(-4x + 1)$
- ?

$$\frac{1}{1+(-4x+1)^2} \cdot -4 = \boxed{\frac{-4}{1+(1-4x)^2}}$$

- 3) What is
- $\frac{d}{dx} \sin^{-1}(x)$
- ?

$$\frac{1}{\sqrt{1-x^2}}$$

- 4) What is
- $\frac{d}{dx} \sec^{-1}(x)$
- ?

$$\frac{1}{|x| \sqrt{x^2-1}}$$

- 5) Given
- $q(x) = \cos^{-1}(-2x + 1)$
- .

What is $\frac{dq}{dx}$?

$$\frac{-1}{\sqrt{1-(1-2x)^2}} \cdot -2 = \boxed{\frac{2}{\sqrt{1-(1-2x)^2}}}$$

- 6) Given
- $g(x) = \cos^{-1}(3x^2 + 2)$
- .

What is $\frac{dg}{dx}$?

$$\frac{-1}{\sqrt{1-(3x^2+2)^2}} \cdot 6x = \boxed{\frac{-6x}{\sqrt{1-(3x^2+2)^2}}}$$