

University of Bahrain
Department of Mathematics
MATHS101: Calculus I
Dr. Abdulla Eid



Worksheet: Derivative of functions involving trigonometric functions

Students' Name: _____

1. Find the derivative of the following functions:

1. $y = x^5 \sin x$

2. $y = \frac{4}{\cos x} + \frac{5}{\tan x}$

3. $y = \tan x \cot x$

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2. For which value(s) is the function defined by

$$f(x) = \begin{cases} ax + b, & x > \frac{\pi}{6} \\ \tan x, & x \leq \frac{\pi}{6} \end{cases}$$

differentiable at $x = \frac{\pi}{6}$?

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