

# WHAT DO YOU CALL A CERTAIN TYPE OF SMALL BLACK INSECT THAT IS ILL?

## Derivatives of the Six Trigonometric Functions:

$y = \sin(x)$	$y = \cos(x)$	$y = \sec(x)$	$y = \csc(x)$	$y = \tan(x)$	$y = \cot(x)$
$y' = \cos(x)$	$y' = -\sin(x)$	$y' = \sec(x)\tan(x)$	$y' = -\csc(x)\cot(x)$	$y' = \sec^2(x)$	$y' = -\csc^2(x)$

Find each derivative.

1) $y = \sin(3x)$	2) $y = \csc(3x)$	3) $y = 3\tan(x)$	4) $y = -\cos(2x)$
5) $y = \cos(x + \frac{\pi}{3})$	6) $y = \cos(\frac{\pi}{3} - x)$	7) $y = \frac{1}{3}\sec(3x)$	8) $y = \sin(\frac{1}{3}x)$
9) $y = \frac{1}{2}\cos(x^2)$	10) $y = \frac{1}{2}\cot(x^2)$	11) $y = \frac{1}{3}\tan(x^3)$	12) $y = \cot(\pi)$
13) $y = \sin^2(x)$	14) $y = \frac{1}{2}\cos(\frac{1}{x^2})$	15) $y = \sin(\sec(x))$	
16) $y = 4\sin(x)\cos(x)$		17) $y = \sec(x)\tan(x)$	

Derivatives.

A. $y' = 0$	A. $y' = -\sin(x + \frac{\pi}{3})$	C. $y' = \sin(\frac{\pi}{3} - x)$	C. $y' = 2\sin(2x)$
D. $y' = \frac{1}{3}\cos(\frac{1}{3}x)$	E. $y' = 3\sec^2(x)$	I. $y' = 3\cos(3x)$	I. $y' = -x\sin(x^2)$
K. $y' = -x\csc^2(x^2)$	L. $y' = 4\cos(2x)$	N. $y' = \sin(2x)$	N. $y' = x^2\sec^2(x^3)$
S. $y' = \sec(3x)\tan(3x)$	S. $y' = \frac{1}{x^3}\sin(\frac{1}{x^2})$	T. $y' = -3\csc(3x)\cot(3x)$	
(. $y' = \sec(x)\tan(x)\cos(\sec(x))$ )		). $y' = \sec(x)[\sec^2(x) + \tan^2(x)]$	

1	2

7

6	12	16	16	3	8

5

14	3	4	12	11	2

15	7	9	4	10

5	13	2	17