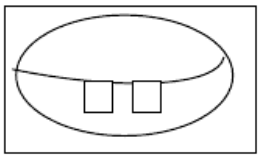
Trig Calculus Review



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12 3 11 6 5 13 4 10 8 9 12 7 4 1 1 4 10

Solve the problems below and place the corresponding letter for the solution in the blanks above.

Problems	**Answers**
1. Determine $\frac{dy}{dx}$ if $y = \cot x$.	A. 1
2. If $y = \cos(2x)$, determine $\frac{d^2y}{dx^2}$.	B. $-8\sin x\cos x$
3. Determine $f'(x)$ if $f(x) = \sec x$.	C. $\frac{2x-2}{49}$
4. Evaluate $\lim_{x\to 0}\frac{\sin(3x)}{x}$.	D. $-4\cos(2x)$
5. Evaluate $\lim_{x\to 0}\left(2x\sin\left(\frac{1}{x}\right)\right)$.	E. $-\csc^2 x$

6. Evaluate $\lim_{x\to 0}(2x\cot x)$.

7. Determine $\frac{dy}{dx}$ if $y^2 = \sin x$.

8. If $y = (\sin x + \cos x)^2$, determine $\frac{d^2y}{dx^2}$.

9. Determine $\frac{dy}{dx}$ if $y = \cos^2(4x)$.

10. Determine $\frac{dy}{dx}$ if $y = \frac{1}{\sin^2 x}$.

11. Evaluate $\lim_{x\to 0}(\sin(5x)\cot(5x))$.

12. Determine $\frac{dy}{dx}$ if $y = t^2$ and $x = 7t + 1$.

13. Determine $\frac{dy}{dx}$ if $y = 2u^2$ and u = $4x - 7$.

F. $\sin(x)$

G. $\tan(x)$

H. $-\frac{2\cos x}{\sin^3 x}$

I. $64x - 112$

J. $\sin(4x)\cos(4x)$

K. $\frac{\cos x}{2y}$

L. $\sec x \tan x$

M. 2

T. 3

U. $-8\cos(4x)\sin(4x)$

W. 0