

## Evaluating Trigonometric Functions

A) Evaluate each function at the specified value.

1)  $f(x) = 3\operatorname{cosec}^2 x + \cot 2x$  ;  $x = -\frac{3\pi}{4}$

2)  $f(x) = 5\sec 3x \cdot \sin 4x$  ;  $x = 0$

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\_\_\_\_\_

B) Evaluate each function.

1)  $f(x) = \frac{3\cos x}{4\sec x}$  ; find  $f\left(\frac{\pi}{4}\right)$

$f(x) = \tan x$  ; find  $f\left(\frac{7\pi}{4}\right)$

\_\_\_\_\_

\_\_\_\_\_

C) If  $f(x) = 3\cos x \cdot \cot 2x$

1)  $f\left(-\frac{\pi}{6}\right) =$  \_\_\_\_\_

3)  $f\left(\frac{2\pi}{3}\right) =$  \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

D) If  $f(x) = 2\sin x - 3\cos x$

1)  $\frac{f\left(\frac{3\pi}{4}\right)}{f\left(\frac{\pi}{6}\right)} =$  \_\_\_\_\_

3)  $9f\left(\frac{\pi}{2}\right) - 8f\left(\frac{5\pi}{4}\right) =$  \_\_\_\_\_

4)  $2f\left(\frac{\pi}{4}\right) + 4f\left(\frac{\pi}{3}\right) =$  \_\_\_\_\_

E) What is the value of  $f(0)$ , if  $f(x) = \frac{4\sec^3 3x}{7\cos^3 4x}$ ?

i)  $\frac{4}{7}$

ii)  $\frac{5}{7}$

iii)  $-\frac{3}{7}$

iv)  $\frac{2}{7}$

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6

0

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1)  $f(x) = \frac{3\cos x}{4\sec x}$  ; find  $f\left(\frac{\pi}{4}\right)$

2)  $f(x) = \sec x + \tan x$  ; find  $f\left(\frac{7\pi}{4}\right)$

$\frac{3}{8}$

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1)  $f\left(-\frac{\pi}{6}\right) =$  \_\_\_\_\_

0

3)  $f\left(\frac{2\pi}{3}\right) =$  \_\_\_\_\_

$\frac{3}{2}$

D) If  $f(x) = 2\sin x - 3\cos x$

1)  $\frac{f\left(\frac{3\pi}{4}\right)}{f\left(\frac{\pi}{6}\right)} =$  \_\_\_\_\_

$4\sqrt{3}$

3)  $9f\left(\frac{\pi}{2}\right) - 8f\left(\frac{5\pi}{4}\right) =$  \_\_\_\_\_

$-9 - 16\sqrt{2}$

4)  $2f\left(\frac{\pi}{4}\right) + 4f\left(\frac{\pi}{3}\right) =$  \_\_\_\_\_

$-4(\sqrt{2} + \sqrt{3})$

E) What is the value of  $f(0)$ , if  $f(x) = \frac{4\sec^3 3x}{7\cos^3 4x}$ ?

i)  $\frac{4}{7}$

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