Evaluating Trigonometric Functions

A) Evaluate each function at the specified value.

1) $f(x) = \sin 2x - 3\cos x$; $x = \pi$

2) $f(x) = \operatorname{cosec} x + \tan 2x$; $x = \dfrac{\pi}{2}$

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B) Evaluate each function.

1) $f(x) = \sec^2 x \cdot \cot^2 x$

find $f\left(-\dfrac{\pi}{6}\right)$

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C) If $f(x) = 4\sin x + 3\sec$

1) $f(0)$ = _____

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3) $f\left(-\dfrac{7\pi}{6}\right)$ = _____

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D) If $f(x) = \tan x \cdot \cot^2 x$

1) $2f\left(\dfrac{2\pi}{3}\right) \times f\left(-\dfrac{\pi}{3}\right)$

) = _____

3) $f\left(\dfrac{\pi}{4}\right) + f\left(\dfrac{\pi}{6}\right)$ = _____

4) $\dfrac{6f\left(\dfrac{5\pi}{6}\right)}{f\left(-\dfrac{2\pi}{3}\right)}$ = _____

E) What is the value of $f\left(-\dfrac{7\pi}{4}\right)$, if $f(x) = 2\sin x - \tan x$?

i) $\sqrt{2} + 1$

ii) $-\sqrt{2} - 1$

iii) $\sqrt{2} - 1$

iv) $\sqrt{2} + 3$