Honors Trigonometry

Copy the original problem.
Convince *me* that **you** understand the concept.
No Calculators!

Name _____

Per _____ Date _____

Chapter 2 Exam

I Determine the exact value of the following. Reduce fully.

(Do not leave radicals (if any) in the denominator) $\csc\left(\dfrac{-7\pi}{12}\right)$ (10 pts)

II For each of the following functions, state the domain, range, period and state whether the function is odd, even, or neither. (5 pts ea)

A) $A(x) = \sin x$ B) $B(x) = \cos x$ C) $C(x) = \tan x$

D) $D(x) = \sec x$ E) $E(x) = \csc x$ F) $F(x) = \cot x$

III State the sine, cosine, and tangent "add/subtract" formulas we use in class. (10 pts tot)

IV Leaving the *LEFT SIDE UNTOUCHED,* **PROVE** the given identity.

(10 pts ea)

A) $3\cos^2 x = \cos 2x + \cos^2 x + 1$

B) $\tan x = \dfrac{1 - \cos 2x}{\sin 2x}$

C) $1 + \dfrac{1}{\cos x} = \dfrac{\tan^2 x}{\sec x - 1}$

D) $\dfrac{3\tan x - \tan^3 x}{1 - 3\tan^2 x} = \tan 3x$

V Given $\sin x = \frac{4}{5}$ and $\frac{\pi}{2} < x < \pi$. Find the exact value of $\sec 3x$. (10 pts)

E X T R A C R E D I T.. **5 pts** ....

Find the exact value of $\tan 15°$