VD 5.1.1

Factoring the following trigonometric expressions, then simplify your answer to the assigned function when possible.

1. $\sin^4 x - \cos^4 x$ (rewrite your final answer to sine function only)	$2\sin^2 x - 1$
2. $\sec^4 x - \tan^4 x$ (rewrite your final answer to tangent function only)	$1 + 2\tan^2 x$
3. $\sec^4 x + 3\sec^2 x - 4$ (rewrite your final answer to tangent function only)	$\tan^2 x(\tan^2 x + 5)$
4. $\csc^3 x - \csc^2 x - \csc x + 1$ (factor completely)	$(\csc x + 1)(\csc x - 1)^2$ or $\cot^2 x(\csc x - 1)$
5. $2 + \sin x - 2\sin^2 x - \sin^3 x$ (factor completely)	$(2 + \sin x)(1 - \sin x)(1 + \sin x)$ or $\cos^2 x(2 + \sin x)$
6. $2\sin^2 x - \cos x - 1$ (factor completely)	$(1 + \cos x)(1 - 2\cos x)$
7. $3\sec^2 x - 5\tan x - 1$ (factor completely)	$(\tan x - 1)(3\tan x - 2)$