What I have to memorize for exam 2 in Math 1523

1) **Reciprocals** [$1/\cos x = \sec x$, $1/\tan x = \cot x$, $(\sec x)\cos x = 1$, ...]

2) **Quotient** [$\tan x = \sin x / \cos x$, $\cot x = \csc x / \sec x$, ...]

3) **Odd / Even** [$\sin(-x) = -\sin x$, $\cos(-x) = \cos x$, $\tan(-x) = -\tan x$]

4) **Cofunction** [$\sin(\frac{\pi}{2} - x) = \cos x$, $\tan(90 - x) = \cot x$, ...]

5) **Pythagorean** [$\sin^2 x + \cos^2 x = 1, 1 - \cos^2 x = \sin^2 x, 1 + \tan^2 x = \sec^2 x$, ...]

6) **Double angle** [$\sin 2x = 2\sin x \cos x$, $\tan 2x = 2\tan x / (1 - \tan^2 x)$, ...]

7) **Law of Sines**

8) **Law of Cosines**

9) **Area of Triangle** [$A = \frac{1}{2} a\, b \sin C$, Heron's Formula]