BASIC TRIG IDENTITIES

TEXT: 2.3

LAST NAME	FIRST NAME	DATE

1 (6 points). Simplify each expression without using a calculator:

(a) $\sin^2\theta \csc\theta$

(b) $\tan(\phi)\cot(\phi)$

(c) $\cos^2(42^\circ) + \sin^2(42^\circ)$

(d) $\dfrac{1}{1-\sin^2\beta}$

(e) $\sec\delta \tan\delta \cos^2\delta \csc^2\delta$

(f) $\csc^2\gamma - \cos^2\gamma - \sin^2\gamma$

2 (2 points). Use a Pythagorean identity to find $\sin(\alpha)$ if $\cos(\alpha) = 3/4$ and α is an angle in the 1st quadrant.

3 (2 points). Use a Pythagorean identity to find $\cos(\kappa)$ if $\sin(\kappa) = 5/9$ and κ is an angle in the 2nd quadrant.

4 (2 points). Use a Pythagorean identity to find $\sec(\lambda)$ if $\tan(\lambda) = 10$ and λ is an angle in the 3rd quadrant.