

Name: _____

For the following problems, find the exact value of the expression. You are expected to give detailed solutions.

1) $4 \cos(34^\circ) \csc(56^\circ) + 2 \sin(67^\circ) \sec(23^\circ)$

2) $2 + \frac{\sin(41^\circ)}{\csc(41^\circ)} + \cos(41^\circ) \sin(49^\circ)$

3) $\frac{\sec(19^\circ)}{\sin(71^\circ)} - \frac{\cot(71^\circ)}{\tan(71^\circ)}$

4) $\cot(32^\circ) \tan(58^\circ) - \csc(32^\circ) \sec(58^\circ)$

5) $1 - \sec^2(64^\circ) + \cot^2(26^\circ)$

6) $5 \sec(32^\circ) \sin(58^\circ) - 3 \tan(12^\circ) \cot(12^\circ)$

7) $6 + \csc^2(82^\circ) - \tan^2(8^\circ)$

8) Let $\theta = \frac{17\pi}{6}$

a) Draw the angle θ

b) What quadrant does θ lie in?

c) Find the reference angle α

d) Find the value of the trigonometric functions evaluated at θ .