

Name : _____

Simplify

Sheet 1

Express each as a single trigonometric function.

1) $\frac{2 \tan \frac{2\pi}{3}}{1 - \tan^2 \frac{2\pi}{3}}$

2) $2 \sin 87^\circ \cos 87^\circ$

3) $\sqrt{\frac{1 - \cos \frac{\pi}{6}}{2}}$

4) $\sqrt{\frac{1 + \cos 8\theta}{2}}$

5) $1 - 2 \sin^2 28^\circ$

6) $\frac{\sin 6\theta}{1 + \cos 6\theta}$

Name : _____

Answer key

Sheet 1

Simplify

Express each as a single trigonometric function.

1) $\frac{2 \tan \frac{2\pi}{3}}{1 - \tan^2 \frac{2\pi}{3}}$

$\tan \frac{4\pi}{3}$

2) $2 \sin 87^\circ \cos 87^\circ$

$\sin 174^\circ$

3) $\sqrt{\frac{1 - \cos \frac{\pi}{6}}{2}}$

$\sin \frac{\pi}{3}$

4) $\sqrt{\frac{1 + \cos 8\theta}{2}}$

$\cos 4\theta$

5) $1 - 2 \sin^2 28^\circ$

$\cos 56^\circ$

6) $\frac{\sin 6\theta}{1 + \cos 6\theta}$

$\tan 3\theta$