Name : _____

Periodic Identities

Use periodic identities to find the exact value of each trigonometric expression.

1) $2\cos\frac{19\pi}{3} + \sin\frac{7\pi}{3}$

2) $\frac{\tan 420^{o}}{5}$

3) $\sec 780^{o} - 8$

4) $\csc\frac{25\pi}{4} - \sec\frac{13\pi}{6}$

5) $\tan 60^{o} \csc 390^{o} \cot 225^{o}$

6) $11\cot\frac{5\pi}{2}$

7) $\frac{\csc 1170^{o} \cot 240^{o}}{\sin 450^{o} \cos 750^{o}}$

8) $7 + \tan\frac{4\pi}{3}$

Name : _____

Answer key

Sheet 1

Periodic Identities

Use periodic identities to find the exact value of each trigonometric expression.

1) $2\cos\frac{19\pi}{3} + \sin\frac{7\pi}{3}$

$\frac{2+\sqrt{3}}{2}$

2) $\frac{\tan 420^{0}}{5}$

$\frac{\sqrt{3}}{5}$

3) $\sec 780^{0} - 8$

-6

4) $\csc\frac{25\pi}{4} - \sec\frac{13\pi}{6}$

$\frac{3\sqrt{2}-2\sqrt{3}}{3}$

5) $\tan 60^{0} \csc 390^{0} \cot 225^{0}$

$2\sqrt{3}$

6) $11\cot\frac{5\pi}{2}$

0

7) $\frac{\csc 1170^{0} \cot 240^{0}}{\sin 450^{0} \cos 750^{0}}$

$\frac{2}{3}$

8) $7 + \tan\frac{4\pi}{3}$

$7+\sqrt{3}$