Olivia Myers 3|23|20

1) $\tan\theta\csc\theta$

$\frac{\sin\theta}{\cos\theta}\left(\frac{1}{\sin\theta}\right)$

$\frac{1}{\cos\theta}$

$\boxed{\sec\theta}$

2) $\sin\theta\cot\theta$

$\sin\theta\ \frac{\cos\theta}{\sin\theta}$

$\boxed{\cos\theta}$

3) $\frac{\cot\theta}{\csc\theta}$

$\cot\theta\ \frac{1}{\csc\theta}$

$\frac{\cos\theta}{\sin\theta}(\sin\theta)$

$\boxed{\cos\theta}$

4) $\frac{\sin\theta}{\tan\theta}$

$\sin\theta\ \frac{1}{\tan\theta}$

$\sin\theta\cot\theta$

$\sin\theta\ \frac{\cos\theta}{\sin\theta}$

$\boxed{\cos\theta}$

5) $4\cos x + 2 = 0$

$4\cos x = -2$

$\cos x = -\frac{1}{2}$

$\boxed{x = \frac{2\pi}{3}\ ;\ x = \frac{4\pi}{3}}$

6) $4\sqrt{3}\csc x - 8 = 0$

$4\sqrt{3}\csc x = 8$

$\sqrt{3}\csc x = 2$

$\csc x = \frac{2}{\sqrt{3}}$

$\sin x = \frac{\sqrt{3}}{2}$

$\boxed{x = \frac{\pi}{3}\ ;\ x = \frac{2\pi}{3}}$