Answer key

The method: Simplifying with identities

Rewrite in terms of sin and cos (tan = sin ÷ cos, sec = 1 ÷ cos, csc = 1 ÷ sin, cot = cos ÷ sin), or use $\sin^2\theta + \cos^2\theta = 1$.

$1 + \tan^2\theta = (\cos^2\theta + \sin^2\theta) \div \cos^2\theta = \sec^2\theta$

write in terms of sin and cos, or use $\sin^2\theta + \cos^2\theta = 1$

$\sin\theta \cdot \cot\theta = \sin\theta \cdot (\cos\theta \div \sin\theta) = \cos\theta$

write in terms of sin and cos, or use $\sin^2\theta + \cos^2\theta = 1$

$\cos\theta \cdot \tan\theta = \cos\theta \cdot (\sin\theta \div \cos\theta) = \sin\theta$

write in terms of sin and cos, or use $\sin^2\theta + \cos^2\theta = 1$

Problems 1 and 2 worked out · Version 0A

$\sin\theta \cdot \cot\theta = \sin\theta \cdot (\cos\theta \div \sin\theta) = \cos\theta$

write in terms of sin and cos, or use $\sin^2\theta + \cos^2\theta = 1$

$1 - \cos^2\theta = \sin^2\theta + \cos^2\theta - \cos^2\theta = \sin^2\theta$

write in terms of sin and cos, or use $\sin^2\theta + \cos^2\theta = 1$

Simplifying with identities · Version 0A

1) $\cos\theta$ 2) $\sin^2\theta$ 3) $\sin\theta$ 4) $\sec\theta$ 5) $\tan^2\theta$
6) 1 7) 1 8) 1 9) $\sec^2\theta$ 10) 1 11) $\csc\theta$
12) $\cos\theta$ 13) $\sin^2\theta$ 14) 1 15) $\sin^2\theta$ 16) $\cos\theta$
17) 1 18) 1 19) $\sec^2\theta$ 20) $\cos^2\theta$ 21) $\sin\theta$