

Quiz 10 – MATH 1540 Spring 2023

Recall the double angle identities:

$$\begin{aligned}\sin(2\theta) &= 2 \sin(\theta) \cos(\theta) \\ \cos(2\theta) &= \cos^2(\theta) - \sin^2(\theta) \\ &= 2 \cos^2(\theta) - 1 \\ &= 1 - 2 \sin^2(\theta)\end{aligned}$$

1. If $\tan(\theta) = -\frac{1}{4}$ and $\cos(\theta) < 0$, then compute

$$\sin(2\theta), \cos(2\theta), \text{ and } \tan(2\theta).$$