Recall the double angle identities:

$$\sin(2\theta) = 2\sin(\theta)\cos(\theta)$$

$$\cos(2\theta) \quad = \cos^2(\theta) - \sin^2(\theta)$$
$$= 2\cos^2(\theta) - 1$$
$$= 1 - 2\sin^2(\theta)$$

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

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