

Double-Angle and Half-Angle Identities

Guided Notes

1. Which of these is not the correct Double-angle identity?

a. $\sin(2C) = 2 \sin(C) \cos(C)$ **b.** $\sin(2P) = 2 \cos(P) \sin(P)$

c. $\sin(2B) = 2 \sin(B) \sin(B)$ **d.** none of these

2. Which of the following represents the correct angle identity?

a. $\sin(90^\circ) = 2 \sin(45^\circ) \cos(30^\circ)$ **b.** $\sin(60^\circ) = 2 \cos(30^\circ) \sin(10^\circ)$

c. $\sin(70^\circ) = 2 \sin(35^\circ) \sin(35^\circ)$ **d.** none of these

3. Which of these is not the correct Half-angle identity?

a. $\sin\left(\frac{\alpha}{2}\right) = \pm \sqrt{\frac{1 - \cos(\alpha)}{2}}$ **b.** $\tan\left(\frac{\alpha}{2}\right) = \pm \sqrt{\frac{1 - \cos(\alpha)}{1 + \cos(\alpha)}}$

c. $\cos\left(\frac{\alpha}{2}\right) = \pm \sqrt{\frac{1 + \cos(2\alpha)}{2}}$ **d.** none of these

4. Which of the following does not represent the correct angle identity?

a. $\sin(30^\circ) = \pm \sqrt{\frac{1 - \cos(60^\circ)}{2}}$ **b.** $\tan(45^\circ) = \pm \sqrt{\frac{1 - \cos(45^\circ)}{1 + \cos(45^\circ)}}$

c. $\cos(45^\circ) = \pm \sqrt{\frac{1 + \cos(90^\circ)}{2}}$ **d.** none of these