Name: _____ Period: _____ Date: _____

Double-Angle and Half-Angle Identities Bell work

Underline the correct word(s) to complete each sentence.

1. Identify the correct statement.

a. $\sin(\theta + \varphi) = \sin(\theta)\cos(\varphi) + \cos(\theta)\sin(\varphi)$.
b. $\sin(\theta - \varphi) = \sin(\theta)\cos(\varphi) + \cos(\theta)\sin(\varphi)$.
c. $\sin(\theta + \varphi) = \cos(\theta)\cos(\varphi) + \sin(\theta)\sin(\varphi)$
d. None of these.

2. Identify the correct statement.

a. $\sin(\theta + \varphi) = \sin(\theta)\cos(\varphi) - \cos(\theta)\sin(\varphi)$.
b. $\sin(\theta - \varphi) = \sin(\theta)\cos(\varphi) - \cos(\theta)\sin(\varphi)$.
c. $\sin(\theta + \varphi) = \cos(\theta)\cos(\varphi) + \sin(\theta)\sin(\varphi)$
d. None of these.

3. Identify the correct statement.

a. $\cos(\theta + \varphi) = \cos(\theta)\cos(\varphi) - \cos(\theta)\cos(\varphi)$.
b. $\cos(\theta + \varphi) = \cos(\theta)\cos(\varphi) - \sin(\theta)\sin(\varphi)$.
c. $\cos(\theta - \varphi) = \cos(\theta)\cos(\varphi) - \sin(\theta)\sin(\varphi)$
d. None of these.

4. Identify the correct statement.

a. $\tan(\theta + \varphi) = \tan(\theta) + \tan(\varphi)$.
b. $\tan(\theta + \varphi) = \frac{\tan(\theta)+\tan(\varphi)}{1-\tan(\theta)\tan(\varphi)}$.
c. $\tan(\theta + \varphi) = \frac{\tan(\theta)+\tan(\varphi)}{1+\tan(\theta)\tan(\varphi)}$
d. None of these.

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Double-Angle and Half-Angle Identities Bell work

ANSWERS

1. $\sin(\theta + \varphi) = \sin(\theta)\cos(\varphi) + \cos(\theta)\sin(\varphi)$
2. $\sin(\theta - \varphi) = \sin(\theta)\cos(\varphi) - \cos(\theta)\sin(\varphi)$
3. $\cos(\theta + \varphi) = \cos(\theta)\cos(\varphi) - \sin(\theta)\sin(\varphi)$
4. $\tan(\theta + \varphi) = \frac{\tan(\theta)+\tan(\varphi)}{1-\tan(\theta)\tan(\varphi)}$