



## Trigonometry Identities - Product to Sum Identity True/False (Degrees)

1 Is this product to sum identity correct?

$$\sin(120^\circ)\sin(45^\circ) = \frac{1}{2} [\sin(120^\circ + 45^\circ) + \sin(120^\circ - 45^\circ)]$$

A  
Yes

B  
No

2 Is this product to sum identity correct?

$$\sin(30^\circ)\sin(45^\circ) = \frac{1}{2} [\cos(30^\circ - 45^\circ) - \cos(30^\circ + 45^\circ)]$$

A  
Yes

B  
No

3 Is this product to sum identity correct?

$$\cos(315^\circ)\cos(225^\circ) = \frac{1}{2} [\cos(315^\circ - 225^\circ) + \cos(315^\circ + 225^\circ)]$$

A  
Yes

B  
No

4 Is this product to sum identity correct?

$$\sin(225^\circ)\cos(150^\circ) = \frac{1}{2} [\sin(225^\circ + 150^\circ) + \sin(225^\circ - 150^\circ)]$$

A  
Yes

B  
No

5 Is this product to sum identity correct?

$$\sin(315^\circ)\sin(45^\circ) = \frac{1}{2} [\cos(315^\circ - 45^\circ) - \cos(315^\circ + 45^\circ)]$$

A  
Yes

B  
No

6 Is this product to sum identity correct?

$$\cos(225^\circ)\cos(60^\circ) = \frac{1}{2} [\cos(225^\circ - 60^\circ) + \cos(225^\circ + 60^\circ)]$$

A  
Yes

B  
No

7 Is this product to sum identity correct?

$$\cos(315^\circ)\cos(330^\circ) = \frac{1}{2} [\sin(315^\circ + 330^\circ) + \sin(315^\circ - 330^\circ)]$$

A  
Yes

B  
No

8 Is this product to sum identity correct?

$$\cos(45^\circ)\sin(120^\circ) = \frac{1}{2} [\sin(45^\circ + 120^\circ) - \sin(45^\circ - 120^\circ)]$$

A  
Yes

B  
No