



## Trigonometry Identities - Sum/Difference to Identity (Degrees)

1

Complete the sum/difference identity for this expression

$$\tan(210^\circ + 45^\circ)$$

$$A \quad \frac{\tan(210^\circ) + \tan(45^\circ)}{1 - \tan(210^\circ)\tan(45^\circ)}$$

$$B \quad \frac{\cos(210^\circ) + \sin(45^\circ)}{1 - \tan(210^\circ)\tan(45^\circ)}$$

2

Complete the sum/difference identity for this expression

$$\cos(210^\circ - 225^\circ)$$

A

$$= \sin(210^\circ)\cos(225^\circ) + \cos^2(210^\circ)$$

B

$$= \cos(210^\circ)\cos(225^\circ) + \sin(210^\circ)\sin(225^\circ)$$

3

Complete the sum/difference identity for this expression

$$\cos(330^\circ - 150^\circ)$$

A

$$= \cos(330^\circ)\cos(150^\circ) + \sin(330^\circ)\sin(150^\circ)$$

B

$$= \sin(330^\circ)\cos(150^\circ) - \cos(330^\circ)\sin(150^\circ)$$

4

Complete the sum/difference identity for this expression

$$\tan(135^\circ + 30^\circ)$$

$$A \quad \frac{\cos(135^\circ) + \sin(30^\circ)}{1 - \tan(135^\circ)\tan(30^\circ)}$$

$$B \quad \frac{\tan(135^\circ) + \tan(30^\circ)}{1 - \tan(135^\circ)\tan(30^\circ)}$$

5

Complete the sum/difference identity for this expression

$$\tan(60^\circ - 150^\circ)$$

A

$$= \sin(60^\circ)\cos(150^\circ) - \cos(60^\circ)\sin(150^\circ)$$

B

$$= \frac{\tan(60^\circ) - \tan(150^\circ)}{1 + \tan(60^\circ)\tan(150^\circ)}$$

6

Complete the sum/difference identity for this expression

$$\tan(315^\circ + 135^\circ)$$

A

$$= \frac{\tan(315^\circ) + \tan(135^\circ)}{1 - \tan(315^\circ)\tan(135^\circ)}$$

B

$$= \frac{\tan(315^\circ) + \tan(135^\circ)}{\tan^2(315^\circ)\tan^2(135^\circ)}$$

7

Complete the sum/difference identity for this expression

$$\cos(30^\circ + 135^\circ)$$

A

$$= \sin(30^\circ)\sin(135^\circ) - \cos(30^\circ)\cos(135^\circ)$$

B

$$= \cos(30^\circ)\cos(135^\circ) - \sin(30^\circ)\sin(135^\circ)$$

8

Complete the sum/difference identity for this expression

$$\tan(330^\circ - 225^\circ)$$

$$A \quad \frac{\cos(330^\circ) + \sin(225^\circ)}{1 - \tan(330^\circ)\tan(225^\circ)}$$

$$B \quad \frac{\tan(330^\circ) - \tan(225^\circ)}{1 + \tan(330^\circ)\tan(225^\circ)}$$