

Product-to-Sum & Sum-to-Product

Write each product as a sum or difference with positive arguments.

1) $\cos 46^\circ \cos 58^\circ$

2) $\sin 101^\circ \sin 3^\circ$

3) $5\cos 44^\circ \sin 19^\circ$

4) $\sin 101^\circ \cos 3^\circ$

5) $\sin 7\theta \cos 2\theta$

6) $\sin 2A \sin 9A$

7) $\sin 3\theta \cos \theta$

8) $-5\cos 4B \sin 7B$

Write each sum or difference as a product with positive arguments.

9) $\sin 12^\circ + \sin 30^\circ$

10) $3\cos 55^\circ + 3\cos 231^\circ$

11) $\sin 263^\circ - \sin 21^\circ$

12) $\cos 49^\circ - \cos 151^\circ$

13) $\sin 12B + \sin 6B$

14) $-2\sin 14A - 2\sin 6A$

15) $\cos 8B + \cos 6B$

16) $\cos 3\theta - \cos 15\theta$