

10.1 Double Angles Notes

EQ: How do I use double angle properties to simplify expressions & solve equations?

How do I prove the double angle properties?

$$\sin(2x) = \sin(x + x)$$

$$\cos(2x) = \cos(x + x)$$

How do I simplify expressions with double angle properties?

Ex. $2\sin 34^\circ \cos 34^\circ$

Ex. Simplify $\cos 2A - \cos^2 A$

How do I find exact values using double angles?

Ex. $\sin x = \frac{3}{4}$ $\frac{\pi}{2} < x < \pi$

Find $\sin 2x, \cos 2x, \tan 2x$

How do I solve equations using double angles?

Ex. Find the a) general solution and b) the values for $0 \leq x < 2\pi$

$$4\sin x \cos x = 2$$

Summary