**Trig Compound Angles Recap**



Derive the following…

1. $sin2x=$
2. $cos2x=$ (the formula in terms of $cosx$ only please)
3. $sin3x=$
4. Rearrange your formula for $cos2x $above to make $cos^{2}x$ the subject

Without a calculator, find the exact value of…

1. $cos15°$
2. $sin105°$
3. $tan75°$

Given that *C* and *D* are acute angles and that $cosC=\frac{12}{13}$ and that $cosD=\frac{3}{5}$, without a calculator find the exact values of…

1. $sinC$
2. $tanC$
3. $cos\left(C+D\right)$
4. $cot\left(C+D\right)$

**Trig Compound Angles Recap - Answers**



Derive the following…

1. $sin2x=2sinxcosx$
2. $cos2x=2cos^{2}x-1$ (the formula in terms of $cosx$ only please)
3. $sin3x=3sinx-4sin^{3}x$
4. Rearrange your formula for $cos2x $above to make $cos^{2}x$ the subject $cos^{2}x=\frac{cos2x+1}{2}$

Without a calculator, find the exact value of…

1. $cos15°=\frac{1+\sqrt{3}}{2\sqrt{2}}=\frac{\sqrt{6}+\sqrt{2}}{4}$
2. $sin105°=\frac{1+\sqrt{3}}{2\sqrt{2}}=\frac{\sqrt{6}+\sqrt{2}}{4}$
3. $tan75°=\frac{1+\sqrt{3}}{\sqrt{3}-1}=2+\sqrt{3}$

Given that *C* and *D* are acute angles and that $cosC=\frac{12}{13}$ and that $cosD=\frac{3}{5}$, without a calculator find the exact values of…

1. $sinC=\frac{5}{13}$
2. $tanC=\frac{5}{12}$
3. $cos\left(C+D\right)=\frac{16}{65}$
4. $cot\left(C+D\right)=\frac{16}{63}$