

Challenge: Show as many alternative ways of writing these as you can.

3a  $\cot x$   $\sin^2 x + \cos^2 x$   
3a  $\operatorname{cosec} x$   $\sin x$   
 $\cos 3x$   $\theta$   $\sin(2y)$   
4a  $a^2 - b^2$   $\sec x$   $\tan x$

*This might seem too simple...but sometimes the obvious, but most important, things can be missed*

Mar 4-10:52

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Top cribs (try not to use them!)

	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$
$\sin \theta$	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$
$\cos \theta$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$
$\tan \theta$	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$

$\sin(3\theta) = \sin(\theta + 2\theta)$        $\cos^2 \frac{\theta}{2} = \frac{1 + \cos \theta}{2}$   
 $\cot \theta = \frac{\cos \theta}{\sin \theta}$   
 $\sin \theta = \tan \theta \cos \theta$        $\tan 2\theta = \frac{\sin 2\theta}{\cos 2\theta}$   
 $\sin^2 \theta = 1 - \cos^2 \theta$

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Possible avenues

Look to either split fractions or to combine them

Difference of two squares

Write in terms of other trig ratios

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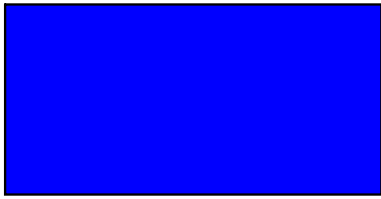
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Example 1

$$\frac{\sin 2A}{\cos^2 A} \equiv 2 \tan A$$



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Example 2

$$\sin 3A \equiv 3 \sin A - 4 \sin^3 A$$



Mar 4-11:03

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Suggested questions

Ex 7F Pages 187 - 188

You may try any questions you please.

The following questions may be of more interest, once you have displayed mastery of the other questions.

Q1 (f), (h)

Q2 (f), (h)

Q4

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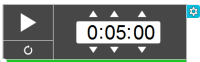
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Exit ticket questions



A video player interface with a play button on the left and a timer showing 0:05:00 in the center. The video content area is empty.

Mar 6-08:16

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Challenge

We have seen

- sin 2A
- sin 3A
- sin 4A

What would the generalisation be for **sin(nA)** ?

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