Review  $\frac{\cot^2\theta + 3\cot\theta - 4}{\cot\theta + 4} = \cot\theta - 1$   $\cot^2\theta + 3\cot\theta - 4 - (\cot\theta + 4)(\cot\theta - 1)$   $\cot\theta + 4 - \cot\theta + 4$ = outo - 1 v tanx-1 - 1- Cotx tanx+1 - 1+ cotx tanx-1 = cotox -1 1 41 fanx +1 1-cotx Cotx 1+ Cotx Cotx  $= \frac{1 - \cot x}{1 + \cot x}$ 

$$(\sec x + \tan x)^{2} = (+ \sin x)$$

$$(\sec x + \tan x)^{2} = (\frac{1}{\cot x} + \frac{\sin x}{\cot x})^{2}$$

$$= (\frac{1 + \sin x}{\cot x})^{2}$$

$$= (1 + \sin x)^{2}$$

$$= (1 + \sin x)^{2}$$

$$= (1 + \sin x)^{2}$$

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

$$= (1 + \sin x)$$

Cut X Csex-Coc2x + 2 cocx +1 Cscx+1 Cocx-1 = Cocx-1 . Cocx+1 CXX 41 COCX+1 CXX+1  $-\frac{Cn^2x-1}{cn^2x+2cocx+1}$  $Cof^2x$ = Coc2x + 2 cocx+1 COX = csc2x - Corx secx = cot x csc2x - coxxpccx= cx2x - 1 = cot x v Cocx pecx = pecx + cxx  $csc^2x$   $sec^2x = \frac{1}{\sin^2x} \cdot \frac{1}{\cos^2x}$ = 1 - Cos2x - Cos2x + sec2x sin2x + Cos3x Esin 2x -

sin (x+y) - coty + cotx cuty - cotx \_ suix cost \_ cosx suiz \_ suix suiz \_ suix suiz sin (x+2) sux cry cox sur sinx suy sinx sing - coty + cotx cos(x+y) = coty - tanx Cosx sing COD (x+4) = CODX CODY - sinx sing Cosx siny assx sing - Corx sung Corx sung = coty - tanx

Cot + sin x sind ~ sec (x+y) = Cos2x - sen29 Cvs(x-4) - (Cox cory - pinx piny (Cox cory + pinx piny)  $\frac{-Cos(x-y)}{Cos^2x cos^2y - sin^2x sin^2y}$ CD (X-y) Cos x (1- sing) - (1-cos x) sing - Cos x - Cos x sing - sing + cos x sing - Cosx cosy + sui x suiz Cos2x - suizy

Cos3x = cosx - 3 cox sin x CO3X = CD (2X+X) = Cos 2x cos x - sin 2x sin x = (cos x - sin x) cox - 2 sin x cox - Co3x - sin2x Cox - 2 sin2x cox = Cos3x - 3 sin x cosx V 1 sin 47 = Ces 3t sint - sin3+ cost 1 sin 4t = 1 sin 2 (24) = 4 (2 sin 2+ cos 2+) = { (2) pint cuty) (cust-suit) = six Cost - sunt cost ~

$$\frac{\cos 2x}{\cos^2 x} = \frac{1 - 2\sin^2 x}{1 - 2\sin^2 x}$$

$$\frac{\cos^2 x}{\cos^2 x} = \frac{1 - 2\sin^2 x}{\cos^2 x}$$

$$= \frac{1}{\cos^2 x} - 2\frac{\sin^2 x}{\cos^2 x}$$

$$= \sec^2 x - 2\frac{\tan^2 x}{\cos^2 x}$$

$$\frac{2 \csc x \cos^2 x}{2} = \frac{\sin^2 x}{\sin^2 x}$$

$$\frac{1 - \cos^2 x}{\sin^2 x}$$

$$= \frac{1 - \cos^2 x}{\sin^2 x}$$

$$= \frac{1 - \cos^2 x}{\sin^2 x}$$

$$= \frac{\sin^2 x}{1 - \cos^2 x}$$

$$\int \frac{\partial c}{\partial x} = \frac{\partial e}{\partial x} + \frac{\partial e}{\partial x} = \frac{\partial e}{\partial x}$$

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$$\int \frac{\partial e}{\partial x} = \frac{\partial e}{\partial x} + \frac{\partial e}{\partial x} = \frac{\partial e}{\partial x} =$$

$$\frac{1-\sin^2 x}{2} = \frac{1+\cos x}{3-\cos x}$$

$$\frac{1-\sin^2 x}{2} = \frac{1-\left(\frac{1}{2}-\frac{1}{2}\cos x\right)}{1+\left(\frac{1}{2}-\frac{1}{2}\cos x\right)}$$

$$\frac{1+\sin^2 x}{2} = \frac{1+\left(\frac{1}{2}-\frac{1}{2}\cos x\right)}{\frac{1}{2}-\frac{1}{2}\cos x}$$

$$= \frac{3}{2}-\frac{1}{2}\cos x$$

$$= \frac{3}{2}-\cos x$$