3,4-55 5/12 -> 13 lecture of 8,15 -317 (COS (A+B) = COSA COSB = sin Asin A COS (A-B) = COSA COSB + sus Asins 8.2 Cosine 1 coscos primis 3) Sin(A+A) = sin A COSB + COSA SinB sw (A-B) = sin A cos & - cos A sin B SINDERA SINB COSS (25 (750) = COD (30°+450) - Cos 30° Cosas-0 sin 30° sin 450 $=\frac{\sqrt{3}}{2}\frac{\sqrt{3}}{2}-\frac{1}{3}\frac{\sqrt{3}}{2}$ ((20 - A) = (0590° , COSA + sin 80° sin A Sin # = sin (3 - 4) 3-4-000 100 = sin 3 Cos 4 - Cos 5 sin II I - II 60-45° V6 - V2

tan (A+B) = Sin (A+B) = SanA+ Sans (Cos(A+B) = (- tanAtanB

COB = -5

BEQUI

$$b) CD (A+B) = COSA COSA - xuiA xui B$$

$$= \frac{4}{5} \left(-\frac{5}{13} \right) - \frac{3}{5} \left(-\frac{12}{13} \right)$$

$$= \frac{-20 + 36}{65}$$

$$= \frac{16}{65}$$

e)
$$COD(A-B) = CODACODB + SIMASMB
= $\frac{4}{5}(-\frac{5}{13}) + \frac{3}{5}(-\frac{12}{13})$
= $\frac{-20-36}{65}$$$

Ex Prove: (0) (x-y) = cotx coty+1 $\frac{\cos(x-y)}{\sin x \sin y} = \frac{\cos x \cos y + \sin x \sin y}{\sin x \sin y}$ = Cosxcog + suix suig suix suig = seix suig = cotx coty + 1 u ,2,17,11,19 Prove $(ot (x+y) = \frac{\cot x \cot y - 1}{\cot x + \cot y}$ cot (x+y)= cos (x+y) = Cosx cosy - sin x sind suix cosy + sing cosx Suix Aug suix suig suix suig f suix suig cotx coty - 1

Prove , sec $(x-y) = \frac{\cos x \cos y - \sin x \sin y}{\cos^2 x - \sin^2 y}$ Dec (x-y) = Cos(x-y) Cosx cosy - sinx sing Cosxcosy-sinx sing = (Cosxcosy + sin x sin) (Cosxcosy - sulx sin) = (cos (x+y) (cos x cos y - sin x sin y = cos (x-00) cos²x (1-sin²y) - (1-cos²x) sin²y = (cos/x + 2) cos2x - (cos2x sin2y - sin2y + (cos2x sin2y) Cost - sing Cos (2A) double angle Cos A = (cos A) = square Cos A2 = Cos (A2) Cule Cos A

3 A Cos 3 A (A+A+A)

(3xA)