(o) mulas COS (A+B) = COSACOSB - SinAsinB sui (A+B) = sui A cos B+ cos A sui B 3,4-35 7,20 ->25 5, 12 -> 13 20, 21 - 29 6 8, 15 -> 17 Sin 2x = 1- Cos2x Cos2x + pin x = 1 / Cos2x = 1 - pin v COD 2 A = COD A - pun A = 2 Cos A - 1 = 1 - 2 sin A sin 2A = 2 sin A Ces A Similar Cos2A = 1 (1+ cos2A) (D) -> f oui -3 sin 2 = = (1-cos 2A) Cos A = + 1/1+cos A sin A = I / 1- CosA

3 
$$\sin A = \frac{d}{5}$$
  $A \in Ga$   $\cos B = \frac{5}{13}$   $A \in Ga$   
 $\cos A = -\frac{3}{2}$   $\sin A = \frac{1}{13}$   $\sin A = -\frac{1}{13}$   
a)  $\sin (A + B) = \sin A \cos B + \cos A \sin B$   
 $= (\frac{4}{5})(\frac{-5}{13}) + (\frac{-3}{2})(\frac{-12}{13})$   $\sin (A + B) = \cos A \cos B = \sin A \sin B$   
 $= (-\frac{3}{5})(\frac{-5}{13}) - (\frac{4}{5})(\frac{-12}{13})$   
 $= 15 + 48$   
Sign  $= (\frac{3}{5})$   
c)  $\tan (A + B) = \sin A \cos B - \cos A \sin B$   
 $= -\frac{1}{20} - \frac{3}{26}$   
e)  $\cos (A - B) = \cos A \cos B + \sin A \sin B$   
 $= \frac{1}{20} - \frac{3}{26}$   
e)  $\cos (A - B) = \cos A \cos B + \sin A \sin B$   
 $= \frac{1}{20} - \frac{3}{26}$   
 $= \frac{3}{23}$ 

tan (A+3) = 56 23 /4 Points  $\frac{E^{2}}{\sin x} \frac{\cos (x-y)}{\sin y} = \cot x \cot y + 1$ Cus(x-y) = Cosx cosy + sinx sing - Cos x Cos y + sen x sen y
sin x sin y
sin x sin y
sin x sin y sin x sing = cotx coty + 1 V  $\frac{E \times \cot (x + y)}{\cot x} = \frac{\cot x \cot y}{\cot x} + \frac{\cot y}{\cot y}$  $\cot(x+9) = \frac{\cot(x+y)}{\sin(x+y)}$ = cox cosy - pinx sing sinx cusy + cus x sung Coty + Cotx 15, 16, 20, 26, 30

sec (x = y) = Cos x cos sin x sin y Cus x = 5in y Cus (x ey) sec (x-y) = Cos(x-y) Cosx cosy - sur sing CD (x + y) (Cox Cory + suix suiy) (Cox cory - suiv suix) CUS (X +8) Cos x cos y - sin x sen y = \(\cos (x + y)\) = \((1 - \cos x)\) sin \(\gamma\)  $\frac{COS(x+y)}{COS^2x-COS^2xsin^2y-sin^2y+COS^2xsin^2y}$ Cos x cos y - sin x sin y

Cos x - sin 2 y 13, 27,28,

#12/ sin (A-B) - fan A - fan B / Cos A cos B Sin (A-B) - sin A Cos B - Cos A sin B Cos A Cos B Cos B - sin A Cos A Cos A Sin S Cos A Cos B Cos A Cos B - fan A - tan B V coty - tanx 15/ COD (x+7) Coty + tanx Cos (x -9) Corx Cory \_ sinxsin y
Corx siny Cos (x+q) = Coxxcory + sinx sing coty - fanx coty + tanx

13/ pec (A+B) = Cw (A-B) = Cw A-B) = Cw A-B) = Cw A-Bin B rec (A+B) = 1 Cos(A-B) Cos(A-B) - Ces (A-B)

(Cos Acos B-sin Asin B) (Cos Acos B+sin sin B) (-) Cos (A-B)

- Cos A Cos B - sin A sin B

- Cos (A-B)

- Cos A (1-sin B) - (1-cos A) sin B - Cos (A-0) - Cos A-sin2B

8.3 sin 2A don ble angle sin (2A) sin 2 A = (sin A) 2 square sin A2 = sin (A2) sin 2A + 2 sin A sin 2A = sin (A+A) = min A cos A + cos A sein A = 2 sui A cos A | Cos 2A = Ces (A -1A) = cos A cos A - sin AsinA = Cos A - sin A) - 1- sun A - sun A = 1-2 sin A = CUS A - (1-CUS A) = CUS A - 1 + CUS A = 2 Cos A - 1) Cos A = 2 cos A - 1 2 cos A = 1+ cos A Ces 2 = 1+ Ws A

$$Cos 2A = 2 cos^{2}A - 1$$

$$Cos^{2}A = \frac{1 + cos 2A}{2}$$

$$Cos A = \frac{1}{2} | 1 + cos A$$

$$sinhich G$$

$$Sin A = \frac{1 - cos A}{2} = \frac{sin A}{1 + cos A}$$

$$Sin A = \frac{3}{5} | A \in G^{1/2}$$

$$Sin 2A = 2 sin A cos A - 1$$

$$= 2 \left(\frac{3}{5}\right) \left(-\frac{4}{5}\right)$$

$$= \frac{24}{25} | 3 - 4$$