Solving Trig	Equation	NJ	
1 tan () + 13 = 1	0 0	60227	T
$\tan\theta = -\sqrt{3}$	-1		
0 = 25,53	-		
2 2 sin (0+47	°) = (0° 4 0 4	2360°
- Sin (0+47°) =	-		
0+47°= 730° -47° -47°	,150°, -47°,	390° -47°	
$\frac{-47^{\circ}}{\theta} = -\frac{1}{\sqrt{7}^{\circ}},$	103°,	343'	
$(3) 4\cos^2\theta = 1$		0 < 2TT	
$O COS^2 \Theta = \frac{1}{4}$			
$\cos \theta = \pm \sqrt{4}$			
$\cos \theta = \pm \frac{1}{2}$	4TT 5T	-	
$\theta = \frac{\pi}{3}, \frac{2\pi}{3},$			
(4) $2\sin\theta\cos\theta = T_{a}$	z cosθ	0400	: 2A
(4) 2 sind cust - 12 2 sind cust - 12 cust (2 sin 0 - 12	$\cos \theta =$	-0	
a = 0 2sint	9-12=	0	
$\int \frac{\pi}{2} \frac{3\pi}{2}$ Sin	0 = 12 2		
10 2, 21 To	=====,	377	
	1.14		

For all value	is of O
$\cos \theta = 0$	Sind = TZ
$\theta = \frac{\pi}{2} + n\pi$	$\theta = \frac{\pi}{4} + 2n\pi$
	$\theta = 3\pi + 2n\pi$
	4-54

Stark & Stark

* 1-21 p - 01 - 316.5

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5 tan 8-13 = 2 tan 8	$0 \in \Theta \subset 2\pi$	For all values of o	
-ztano -ztano		$tan \theta = -13$	Y
$-\tan\theta - 13 = 0$		$\theta = 2\pi + n\pi$	6
$\tan \theta = -73$		3	Ĭ
$0 = \frac{2\pi}{3}, \frac{3\pi}{3}$	1.1		

(b) $2\sin^2\theta + \sin^2\theta = 0$ $0 \le \theta < 2\pi$ $\sin^2\theta (2\sin^2\theta + 1) = 0$ $\sin^2\theta (2\sin^2\theta + 1) = 0$ $\sin^2\theta = 0$ $2\sin^2\theta + 1 = 0$ $\theta = 0, \pi$ $\sin^2\theta = -\frac{1}{2}$ $\theta = -\frac{7\pi}{6}, \frac{11\pi}{6}$

(a)
$$\sin^2\theta + 5\sin\theta + 4 = 0$$
 $0 \le \theta < 24$
 $(\sin\theta + 2)(\sin\theta + 3) = 0$
 $\sin\theta + 2 = 0$ $\sinh\theta + 3 = 0$
 $\sin\theta + 2 = 0$ $\sinh\theta + 3 = 0$
 $\sin\theta = -3$
 $\sin\theta = -3$
 $\sin\theta = \sin\theta$
 $\sin\theta = \sin\theta$

(tan20-sec0-1=0 Sec20-1 - sec0-1 = 0 Sec 20-sec 6-2=0 (Seco + 1) (Seco - 2) = 0 $Sec\theta + 1 = 0$ $Sec\theta - 2 = 0$ $Sec \theta = -1$ $Sec \theta = 2$ $\frac{1}{\cos \Theta} = 2$ $\frac{1}{\cos\theta} = -1$ $\cos \phi = \frac{1}{2}$ $\cos \theta = -1$ 0=13,51 $\theta = \pi$

For all values of O $Cos \theta = \frac{1}{2}$ $\cos \Theta = -1$ $\theta = \frac{\pi}{3} + 2n\pi$ $\theta = \pi + 2n\pi$ 8= 57 +2nT

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(i)
$$1-\cos\theta = -\sin\theta$$
 $0 \le \theta < 2\pi$
 $(1-\cos\theta)^2 = (-\sin\theta)^2$
($1-\cos\theta$)($1-\cos\theta$) $= (-\sin\theta)^2$
 $1-2\cos\theta + \cos^2\theta = \sin^2\theta$
 $1-2\cos\theta + \cos^2\theta = 1-\cos^2\theta$
 $2\cos\theta + \cos^2\theta = 1-\cos^2\theta$
 $2\cos\theta (\cos\theta - 1) = 0$
 $2\cos\theta (\cos\theta - 1) = 0$
 $2\cos\theta = 0$ $\cos\theta - 1 = 0$
 $\cos\theta = 0$ $\cos\theta = -1$
 $\theta = \frac{\pi}{2}, \frac{3\pi}{2}$ $\theta = 0$
check for extraneous solutions
b/c we squared tack sides :
 $1-\cos\frac{\pi}{2} = -\sin\frac{\pi}{2}$ $1-\cos\theta = -\sin\theta$
 $1-1 = -0$
 x $\sqrt{2}$

	And the second se	
(1) $4\sin\theta\cos\theta = 13 0 \leq \theta \leq 2\pi$	State Base of State	
$2 \cdot 2 \sin \theta \cos \theta = 13$		
double angle		
$2 \cdot \sin 20 = 13$		
$\frac{13}{2}$		
20 = 팤, 끜, 푹+ 패 = 갯, 끜 +2	T = 87	
日= 丧, 晋, 7万, 4丁		
$(12) \frac{\sin(90^{\circ} - \theta)}{10} = -13 0^{\circ} \le \theta < 360^{\circ}$		
$\frac{1}{2} \frac{1}{2} \frac{1}$	Star Brank Starten	and the second s
SIND		
$\cot \theta = -13$	Carrier and a strength of the	
$\tan \theta = -\frac{1}{13}$	D'action of the second	
$\tan \theta = -\frac{13}{3}$		
T	0 (1	
$\theta = 150^\circ, 330^\circ$		
(3) $\sin 20 \cos 64^\circ + \cos 20 \sin 64^\circ = \frac{\gamma}{3}$	3 0°2 0 2360°	
$\sin^{4}(10^{\circ}) = \frac{13}{2}$		
$2\theta + 64^{\circ} = 60^{\circ}, 120^{\circ}, 420^{\circ}, 4$ $-\frac{-64^{\circ}}{-4^{\circ}} -\frac{-64^{\circ}}{56^{\circ}} -\frac{-64^{\circ}}{356^{\circ}} -\frac{-2}{2}$ $-\frac{+2}{2} -\frac{+2}{2} -\frac{+2}{2} -\frac{+2}{2} -\frac{+2}{2}$ $\theta = -2^{\circ} - 28^{\circ} - 178^{\circ} - 2$	$\frac{04}{116^{\circ}} - \frac{04}{716^{\circ}} - \frac{07}{776^{\circ}}$	

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$$5 \operatorname{Sec}^{2} \theta + 2 \tan \theta - 8 = 0 \quad 0^{\circ} \leq \theta < 360^{\circ}$$

$$5 (\tan^{2}\theta + 1) + 2 \tan \theta - 8 = 0$$

$$5 \tan^{2}\theta + 5 + 2 \tan \theta - 8 = 0$$

$$5 \tan^{2}\theta + 5 + 2 \tan \theta - 8 = 0$$

$$5 \tan^{2}\theta + 2 \tan \theta - 3 = 0$$

$$(5\tan \theta - 3)(\tan \theta + 1) = 0$$

$$5 \tan \theta - 3 = 0 \quad \tan \theta + 1 = 0$$

$$\tan \theta = \frac{3}{5} \quad \tan \theta = -1$$

$$\boxed{\theta \approx 31^{\circ}, 211^{\circ}} \quad \theta = 135^{\circ}, 315^{\circ}$$

$$(\operatorname{used \ calculator})$$

$$(5) \operatorname{Sin}^{2}\theta + \operatorname{Sin}\theta - 1 = 0 \quad 0 \leq \theta < 2\pi$$

$$\operatorname{x}^{2} + x - 1 = 0$$

$$\operatorname{dves \ nit} \operatorname{factor} \dots \operatorname{guad} \operatorname{Formula}$$

$$\operatorname{Sin} \theta = -\frac{1 \pm \sqrt{1^{2} - 4(\sqrt{2} - 1)}}{2(1)} = -\frac{1 \pm \sqrt{5}}{2}$$

$$\operatorname{Sin} \theta \approx .618 \quad \operatorname{Sin} \theta \approx -1.618$$

$$\boxed{\theta \approx .67 \operatorname{rad}, 2.48 \operatorname{rad}} = 0$$

(16

) $\cos 3\theta = \pm$ $\frac{3\theta}{2} = \pm, 5 \pm,$	$0 \leq \theta \leq 2\pi$	51+211=11	$\frac{77}{3} + 2\Pi = \frac{137}{3}, \frac{1}{3}, \frac{1}{3}$	17 + 21 = 171 3 + 21 = 171 3
$3\theta = \frac{\pi}{3}, \frac{5\pi}{3}, $	+3 +3		+ 3	-: 3
$\theta = \frac{\pi}{q}, \frac{5\pi}{q}$	$, \frac{71}{9},$	11 9)	3)	9
0-9-				/