

5-13-14
3rd Trig

PT 1

$$\textcircled{21} \frac{\cos^2 \theta}{1 + \sin \theta}$$

$$\cos^2 \theta + \sin^2 \theta = 1$$

$$-\sin^2 \theta - \sin^2 \theta$$

$$\cos^2 \theta = 1 - \sin^2 \theta$$

$$\frac{1 - \sin^2 \theta}{1 + \sin \theta} = \frac{\cancel{(1 + \sin \theta)}(1 - \sin \theta)}{\cancel{1 + \sin \theta}}$$
$$= 1 - \sin \theta$$

$$\textcircled{22} \frac{\cos \theta}{\sin \theta \cdot \cot^2 \theta}$$

$$\frac{\cos \theta}{\frac{\cancel{\sin \theta}}{1} \cdot \frac{\cos \theta \cdot \cos \theta}{\cancel{\sin \theta} \cdot \sin \theta}}$$

$$\frac{\cos \theta}{\frac{\cos^2 \theta}{\sin \theta}}$$

$$\frac{\cancel{\cos \theta}}{1} \cdot \frac{\sin \theta}{\cancel{\cos \theta} \cos \theta}$$

$$\frac{\sin \theta}{\cos \theta}$$

$$\tan \theta$$

$$\textcircled{26} \cos\left(\frac{\pi}{2} + \theta\right)$$

$$= \cos\frac{\pi}{2} \cdot \cos\theta - \sin\frac{\pi}{2} \cdot \sin\theta$$



$$\xrightarrow{T_{1/2}(0,1)} 0 \cdot \cos\theta - 1 \cdot \sin\theta$$

$$0 - \sin\theta$$

$$- \sin\theta$$

$$\text{Amplitude} = 8$$

$$\text{Period} = 90$$

$$\text{Phase Shift} = 8^\circ$$

$$y = 8 \sin\left(\frac{4}{b}\theta - \frac{32}{c}\right)$$

$$\text{Period} = \frac{360}{b}$$

$$\text{P.S.} = \frac{-c}{b}$$

$$\frac{90}{1} = \frac{360}{b}$$

$$\frac{8^\circ}{1} = \frac{-c}{4}$$

$$90b = 360$$

$$-c = 32$$

$$b = 4$$

$$c = -32$$

$$\text{Amp} = 2$$

$$\text{Period} = 720^\circ$$

$$\text{Phase Shift} = .4^\circ$$

$$y = 2 \sin\left(\frac{1}{2}\theta - \frac{2}{c}\right)$$

$$\text{Period} = \frac{360}{b}$$

$$\frac{720}{1} = \frac{360}{b}$$

$$\frac{720}{720} b = \frac{360}{720}$$

$$b = \frac{1}{2}$$

$$\text{P.S.} = \frac{-c}{b}$$

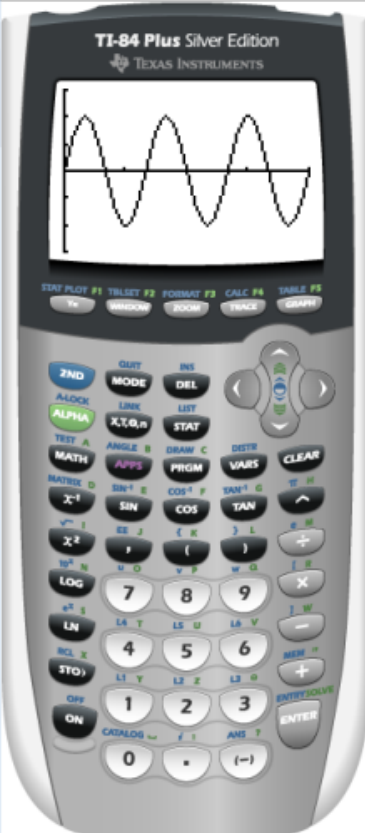
$$\frac{4}{1} = \frac{-c}{\frac{1}{2}}$$

$$-c = 2$$

$$c = -2$$

TI-SmartView

File Edit View Tools Scripts Help



TI-84 Plus Silver Edition
TEXAS INSTRUMENTS

WINDOW

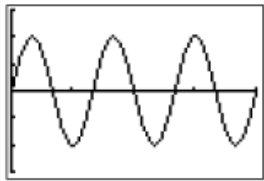
Xmin=0
Xmax=6.2831853...
Xscl=1.5707963...
Ymin=-3
Ymax=3
Yscl=1
Xres=1

Window

X	Y1
0	0
MINIMUM	.28224
	-.5588
	.82424
	-1.073
MAXIMUM	1.3006
	-1.502

X=0

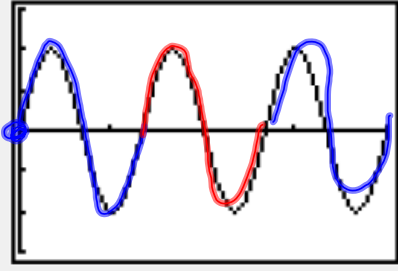
Table



Graph

Key Press History

Large Screen



$y = 2 \sin(3\theta)$

Mables

4th Logic
iven 2013-14

Smoking
Facts just...

2nd Logic
iven 2013-14

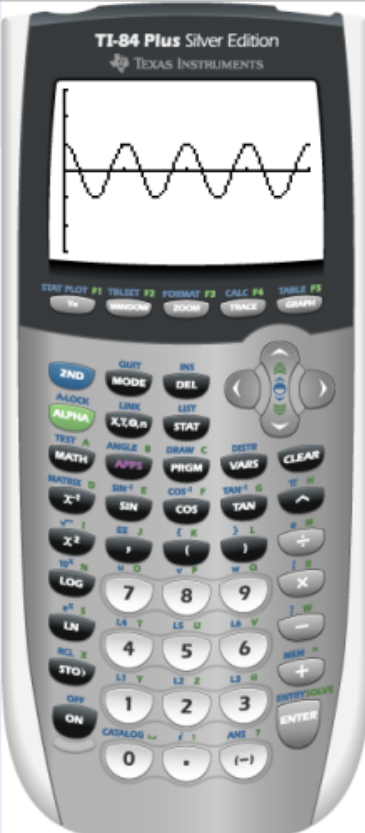
Chapter 9
Test equ...

Parade lineup
2013-14

Zach B

TI-SmartView

File Edit View Tools Scripts Help



TI-84 Plus Silver Edition
TEXAS INSTRUMENTS

WINDOW

Xmin=0
Xmax=6.2831853...
Xscl=1.5707963...
Ymin=-3
Ymax=3
Yscl=1
Xres=1

Window

X	Y1
0	1
0.6536	-.1455
1.3071	-.84385
1.9607	-.9577
2.6143	.40808
3.2678	.42418

X=0

Table

Graph

Key Press History

Large Screen

$y = \cos(4\theta)$

Mables

4th Logic
iven 2013-14

Smoking

Smoking
Facts just...

2nd Logic
iven 2013-14

Chapter 9
Test equ...

Parade lineup
2013-14

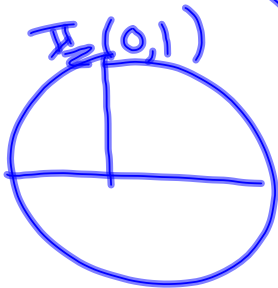
Zach B

5-13-14
4th Trig

PT 1

(26) $\cos\left(\frac{\pi}{2} + \theta\right)$

$$\cos\frac{\pi}{2} \cdot \cos\theta - \sin\frac{\pi}{2} \cdot \sin\theta$$



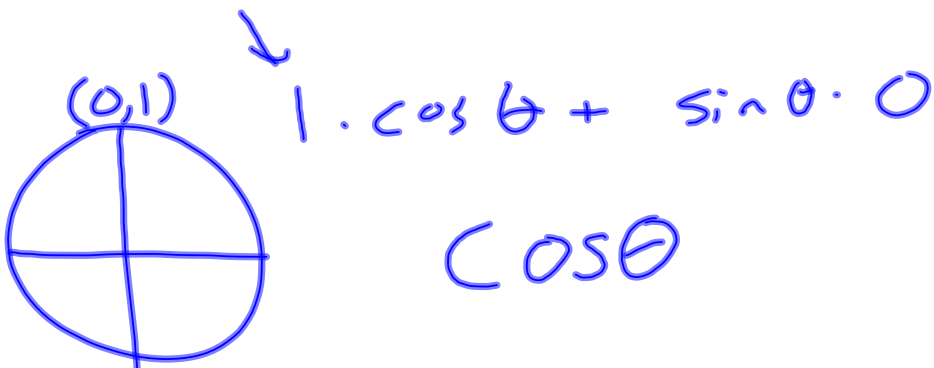
$$0 \cdot \cos\theta - 1 \cdot \sin\theta$$

$$0 - \sin\theta$$

$$-\sin\theta$$

(25) $\sin(90^\circ + \theta)$

$$= \sin 90^\circ \cdot \cos\theta + \sin\theta \cdot \cos 90^\circ$$



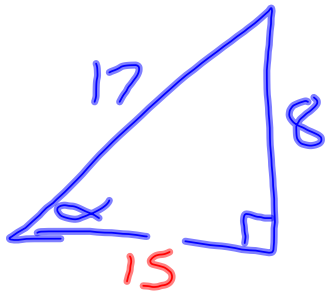
$$1 \cdot \cos\theta + \sin\theta \cdot 0$$

$$\cos\theta$$

$$\cos(\alpha \pm \beta) = \cos\alpha \cdot \cos\beta \mp \sin\alpha \cdot \sin\beta$$

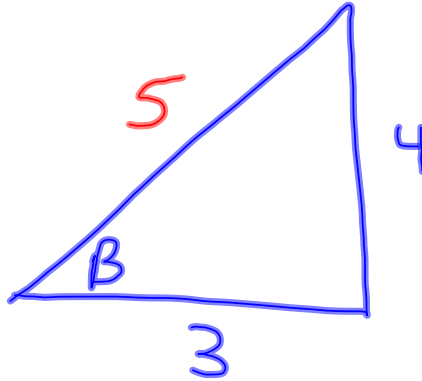
$$\textcircled{15} \quad \sin \alpha = \frac{8}{17} \quad \text{csc } \beta = \frac{4}{3}$$

$$\cos(\alpha + \beta)$$



$$8^2 + b^2 = 17^2$$

$$64 + b^2 = 289$$



$$\textcircled{21} \quad \frac{\cos^2 \theta}{1 + \sin \theta}$$

$$\frac{\cos^2 \theta + \sin^2 \theta = 1}{- \sin^2 \theta \cdot \sin^2 \theta}$$

$$\cos^2 \theta = 1 - \sin^2 \theta$$

$$\frac{1 - \sin^2 \theta}{1 + \sin \theta}$$

$$\frac{\cancel{(1 + \sin \theta)} (1 - \sin \theta)}{\cancel{1 + \sin \theta}}$$

$$1 - \sin \theta$$

$$\textcircled{24} \quad \frac{\tan^2 \theta}{\sec^2 \theta}$$

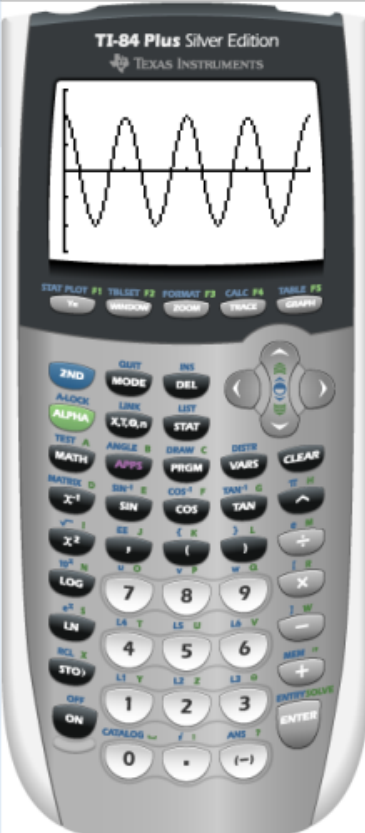
$$\frac{\sin^2 \theta}{\cos^2 \theta}$$

$$\frac{1}{\cos^2 \theta}$$

$$\frac{\sin^2 \theta}{\cancel{\cos^2 \theta}} \cdot \frac{\cancel{\cos^2 \theta}}{1} = \frac{\sin^2 \theta}{1}$$
$$= \sin^2 \theta$$

TI-SmartView

File Edit View Tools Scripts Help



TI-84 Plus Silver Edition
TEXAS INSTRUMENTS

WINDOW

Xmin=0
Xmax=6.2831853...
Xscl=1.5707963...
Ymin=-3
Ymax=3
Yscl=1
Xres=1

Window

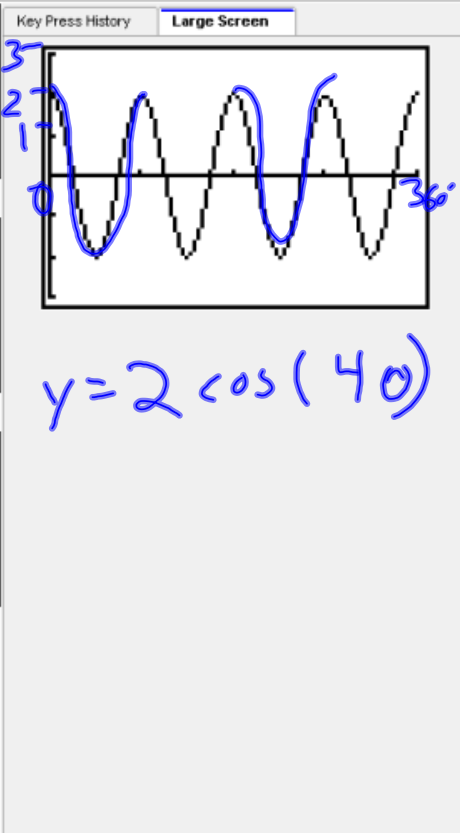
X	Y1
0	2
1.307	-1.307
2.614	-2.614
3.921	-1.6877
5.228	-1.915
6.535	.81616
7.842	.84836

Table

X=0

Graph

Key Press History Large Screen



$y = 2 \cos(4\theta)$

Desktop icons: Mabbles, 4th Logic given 2013-14, Smoking, Smoking Facts just..., End Logic given 2013-14, Chapter 9 Test equ..., Parade lineup 2013-14, Zach B.

Give equation with
amp = 8
period = 90°
phase shift = 8°

$$y = 8 \sin \left(\frac{4}{b} \theta - \frac{32}{c} \right)$$

$$\text{period} = \frac{360}{b}$$

$$\text{p.s.} = \frac{-c}{b}$$

$$\frac{90}{1} = \frac{360}{b}$$

$$\frac{8}{1} = \frac{-c}{4}$$

$$90b = 360$$

$$-c = 32$$

$$b = 4$$

$$c = -32$$