Week 11 Wednesday

March 20, 2019 7:43 AM 7.4 Gat'd

For any point (xiy): $Sid=\frac{0}{H}=\frac{y}{r}$ $Gid=\frac{x}{r}$ $tand=\frac{y}{r}$ $csc\theta = \frac{1}{5} \qquad Sec\theta = \frac{1}{5} \qquad Gf \theta = \frac{1}{5}$ where $r = \sqrt{x^2 + y^2}$

Q I Quadrat ad QIV CAST Rule: Indicates which of site, GID and tand are 20 in each quadrant sitta 1 all 20 SATC tano >0 (05+ >0 (Sito, 6120) (Sito, tano <0)

$$\begin{aligned} f_{X}: & \text{Given } G_{S} = -\frac{1}{4} \text{ and } Sin \neq <0 \\ & \text{fill the other } S \text{ values.} \\ & \text{Gs}, Sin \neq <0 \implies QIII \quad \text{for } \\ & \text{Gs} = \frac{1}{7} = -\frac{1}{4} \\ \hline \begin{array}{c} \hline X=-1 & \hline Y=4 \\ \hline X=-1 & \hline Y=4 \\ \hline \end{array} & y=? \\ & \hline \end{array} & \begin{array}{c} r=\sqrt{3^{2}+y^{2}} \\ & y=? \\ & 16=1+y^{2} \\ & 16=1+y^{2} \\ & 15=y^{2} \\ & y=f(IS) \\ \hline \end{array} & \begin{array}{c} \hline \\ & y=-IIS \\ \hline \end{array} & \begin{array}{c} \hline \\ & y=-IIS \\ \hline \end{array} & \begin{array}{c} \hline \\ & Sin = -\frac{1}{7} - \frac{1}{4} \\ \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \\ & GII = -\frac{1}{4} \\ \hline \end{array} & \begin{array}{c} \hline \end{array} & \end{array} & \begin{array}{c} \hline \end{array} & \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \end{array} & \begin{array}{c} \hline \end{array} & \begin{array}{c} \hline \end{array} & \end{array}$$

7.5 Properties of Trig Functions

Function Donai 1=0 tant= x tert= y } \$ \$ 90°, 270°, ... -90°, -270°, ... 0 \$ odd multiplus of 90° $csc = \frac{1}{y}$ $cst = \frac{3}{y}$ y≠0 0≠ 0°, 180°, 360°,... -180°, ... Of multiple of 180° Sile = 3/r 7 GSO = x/r rto 1-20 < 0 < 20 r=distance>0 and b

Periodic Properties
Let k be an integer
Sin (
$$\theta$$
 + 2π k) = $5in \theta$
Ex: $5in \frac{\pi}{2} = 5in \frac{5\pi}{2} = 5in \frac{-3\pi}{2}$
 $\pm 2\pi$
 $\pm 2\pi$
 $\pm 2\pi$
 $\pm 2\pi$
 $\pm 4\pi$
 $\pm 4\pi$
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 $\pm 4\pi$
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 $\pm 4\pi$
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Lectures Page 3

SUMMARY

Periodic Proputies	TAM RIGE LAW 35
Let k be an integer	$\tan(\theta + \pi k) = \tan \theta$
$Sin(\theta + 2\pi k) = Sin \theta$ $Gs(\theta + 2\pi k) = Gs \theta$	$Gt(\theta+\pi k) = Gt\theta$
$csc (0 + 2\pi k) = csc 0$ sec (0 + 2\pi k) = sel 0	"Period = TT"
"Period = 2TT "	

EX: Simplify

(1) $\tan(1+3\pi) = \tan x$ (1) $\sin(1+3\pi) = \tan x$ (1) $\sin(1+3\pi) = \sin(1+\pi)$ (2) $\tan 210^{\circ} = \tan 30^{\circ} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$ (3) $\sin 450^{\circ} = \sin 90^{\circ} = \frac{1}{\sqrt{3}} = 1$ (3) $\sin 450^{\circ} = \sin 90^{\circ} = \frac{1}{\sqrt{3}} = 1$ (3) $\sin 450^{\circ} = \sin 90^{\circ} = \frac{1}{\sqrt{3}} = 1$ (3) $\sin 450^{\circ} = \sin 90^{\circ} = \frac{1}{\sqrt{3}} = 1$ (3) $\sin 450^{\circ} = \sin 90^{\circ} = \frac{1}{\sqrt{3}} = 1$