4.2 Right $\Delta$ Trig SohCahtoa


$$
\begin{aligned}
& \sin \theta=\frac{a}{c} \quad \csc \theta=\frac{c}{a} \\
& \cos \theta=\frac{b}{c} \quad \sec \theta=\frac{c}{b} \\
& \tan \theta=\frac{a}{b} \quad \cot \theta=\frac{b}{h} \\
& \Rightarrow 1 \operatorname{cog}^{2}+\operatorname{leg}^{2}=h y \\
& \cos a=\frac{\sqrt{11}}{6} \\
& c a=\cos ^{-1}\left(\frac{\sqrt{11}}{6}\right) \\
& \angle a=56.44^{\circ}
\end{aligned}
$$

$$
a^{2}+b^{2}=c^{2} \quad \Longrightarrow \operatorname{leg}^{2}+\text { leg }^{2}=\text { hypo }^{2}
$$

$$
5 \frac{6}{\sqrt{11}}
$$

PorI I special Right $\Delta$ 'S

$$
\begin{aligned}
& \frac{x \sqrt{3} \int_{200}^{30} 2 x}{x} \\
& \tan 30^{\circ}=\frac{x}{x \sqrt{3}}=\frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}=\left(\frac{\sqrt{3}}{3}\right) \\
& \cos 45=\frac{x}{x \sqrt{2}}=\frac{1}{\sqrt{2}}
\end{aligned}
$$

$$
\begin{aligned}
& \sin \frac{\pi}{3}=\frac{x \sqrt{3}}{2 x}=\frac{\sqrt{3}}{2} \quad \cos 45=x v_{2}-v 2 \\
& \frac{60^{\circ}}{\frac{\pi}{6}} \\
& \left(30^{\circ}\right)
\end{aligned}
$$

Purt III Cualuating w/ Calc

1) $\cos 90^{\circ}$

2) $\sec \pi$ $\frac{1}{\cos \pi}$
3) $\tan 40^{\circ}$

$$
.84 \quad \frac{1}{\tan (40)} \approx 1.19
$$

5) $\operatorname{Tan} \frac{3 \pi}{4}<\frac{180}{\pi}$

