

Evaluate Inverse Trig Functions

Sec 4.7 p351 # 4-7, 9-15 odd (No Calc), 17-23 odd (Calc)

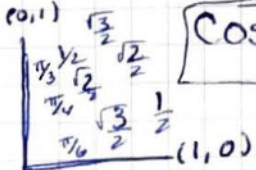
#4) $\sin(\frac{\pi}{6}) = \frac{1}{2}$

#5) $\tan(-\frac{\pi}{4}) = -1$

#6) $\arccos \frac{\sqrt{2}}{2} = \frac{\pi}{4}$

Some $\rightarrow \arcsin(\frac{1}{2}) = \frac{\pi}{6}$
or $\boxed{\sin^{-1}(\frac{1}{2}) = \frac{\pi}{6}}$

$\boxed{\tan^{-1}(-1) = -\frac{\pi}{4}}$

$\boxed{\cos \frac{\pi}{4} = \frac{\sqrt{2}}{2}}$


#7) $\arcsin(-1) = -\frac{\pi}{2}$

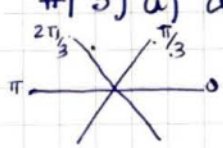
#9) a) $\arccos \frac{1}{2} = \boxed{\frac{\pi}{3}}$ b/c lies in $[0, \pi]$

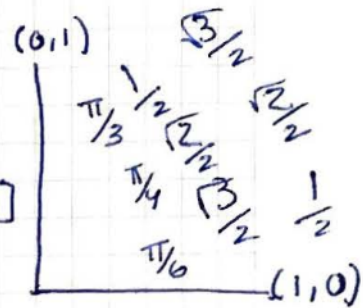
b) $\arccos 0 = \boxed{\frac{\pi}{2}}$

| | |
|---|---|
| S | A |
| T | C |

$\boxed{\sin(-\frac{\pi}{2}) = -1}$

#11) a) $\arccos(-\frac{\sqrt{2}}{2})$

#13) a) $\arccos(-\frac{1}{2}) = \boxed{\frac{2\pi}{3}}$ b/c $[0, \pi]$




$\boxed{\frac{3\pi}{4}}$

b) $\arcsin(-\frac{\sqrt{2}}{2}) = \boxed{-\frac{\pi}{4}}$ b/c $-\frac{\pi}{4}$ lies in $(-\frac{\pi}{2}, \frac{\pi}{2})$

b) $\arcsin \frac{\sqrt{2}}{2} = \boxed{\frac{\pi}{4}}$ b/c $[\frac{-\pi}{2}, \frac{\pi}{2}]$

#15) a) $\arcsin(-1) = \boxed{-\frac{\pi}{2}}$ b/c $[-\frac{\pi}{2}, \frac{\pi}{2}]$

#17) $y = \arccos x \rightarrow x = \cos y$
 $(-1, \frac{\pi}{2})$
 $(-\frac{1}{2}, \frac{2\pi}{3})$
 $(\frac{\sqrt{3}}{2}, \frac{\pi}{6})$

b) $\arccos(1) = \boxed{0}$ b/c $[0, \pi]$

#19) a) $\arcsin(-0.75) \approx \boxed{-0.85}$

#21) a) $\arcsin 0.4 \approx \boxed{0.42}$

#23) a) $\arctan 0.98 \approx \boxed{0.78}$

b) $\arccos(-0.7) \approx \boxed{2.035}$

b) $\arccos 0.36 \approx \boxed{1.20}$

b) $\arctan 4.57 \approx \boxed{1.36}$

