

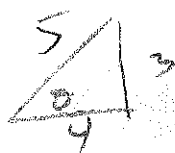
§4.7 Day 2: p 379 #37, 39, 41, 49-67 odd, 91, 92

(37) $\tan \theta = \frac{x}{4}$
 $\theta = \arctan\left(\frac{x}{4}\right)$

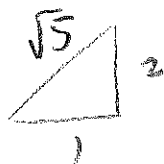
(39) $\sin \theta = \frac{x+2}{5}$
 $\theta = \arcsin\left(\frac{x+2}{5}\right)$

(41) $\cos \theta = \frac{x+3}{2x}$
 $\theta = \arccos \frac{x+3}{2x}$

(49) $\sin(\arctan \frac{3}{4}) = \frac{3}{5}$



(51) $\cos(\tan^{-1} 2) = \frac{\sqrt{5}}{5}$



(53) $\cos(\arcsin \frac{5}{13}) = \frac{12}{13}$



(55) $\sec(\arctan(-\frac{3}{5})) = \frac{\sqrt{34}}{5}$



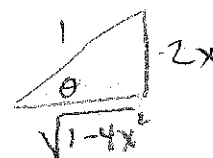
(57) $\sin[\arccos(-\frac{2}{3})] = \frac{\sqrt{5}}{3}$



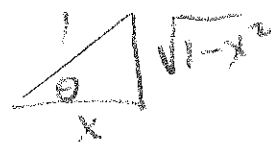
(59) $\cot(\arctan x) = \frac{1}{x}$



(61) $\cos(\arcsin 2x) = \frac{\sqrt{1-4x^2}}{1}$



(63) $\sin(\arccos x) = \sqrt{1-x^2}$



(65) $\tan(\arccos \frac{x}{3}) = \frac{\sqrt{9-x^2}}{x}$



(67) $\csc(\arctan \frac{x}{\sqrt{2}}) = \frac{\sqrt{x^2+2}}{x}$



91



a) $\sin \theta = \frac{5}{5}$

$$\theta = \arcsin\left(\frac{5}{5}\right)$$

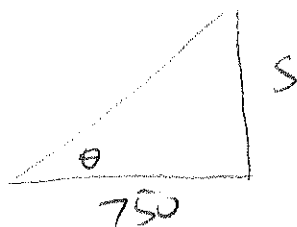
b) $\theta = \arcsin\left(\frac{5}{40}\right)$

$$= \arcsin\left(\frac{1}{8}\right) \approx 7.18^\circ$$

$$\theta = \arcsin\left(\frac{5}{20}\right)$$

$$= \arcsin\left(\frac{1}{4}\right) \approx 14.48^\circ$$

92



a) $\tan \theta = \frac{5}{750}$

$$\Rightarrow \theta = \arctan\left(\frac{5}{750}\right)$$

b) $\theta = \arctan \frac{500}{750} \approx 33.7^\circ$

$$\theta = \arctan \frac{1200}{750} \approx 57.99^\circ$$