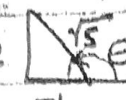
Sec 4.3

Pg 383 (1-51 odd) & (61-66 all)

① 450° not coterminal

$-210°$ $+360°$ $150°$ $+360°$ $510°$ $+360°$ $870°$

② $-\frac{5\pi}{3}$ not coterminal

③ 

$a^2+b^2=c^2$

$(2)^2+(-1)^2=c^2$

$4+1=c^2$

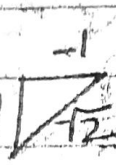
$5=c^2$

$\sqrt{5}=c$

$\sin\theta=\frac{2}{\sqrt{5}}$ or $\frac{2\sqrt{5}}{5}$ $\csc\theta=\frac{\sqrt{5}}{2}$

$\cos\theta=\frac{-1}{\sqrt{5}}=-\frac{\sqrt{5}}{5}$ $\sec\theta=-\sqrt{5}$

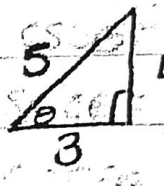
$\tan\theta=-2$ $\cot\theta=-\frac{1}{2}$

⑤ 

$\sin\theta=\frac{-1}{\sqrt{2}}=-\frac{\sqrt{2}}{2}$ $\csc\theta=-\sqrt{2}$

$\cos\theta=-\frac{1}{\sqrt{2}}=-\frac{\sqrt{2}}{2}$ $\sec\theta=-\sqrt{2}$

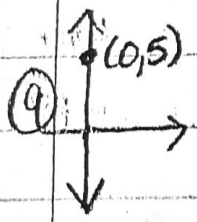
$\tan\theta=1$ $\cot\theta=1$

⑦ 

$\sin\theta=\frac{4}{5}$ $\csc\theta=\frac{5}{4}$

$\cos\theta=\frac{3}{5}$ $\sec\theta=\frac{5}{3}$

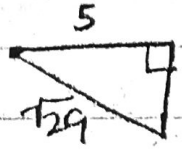
$\tan\theta=\frac{4}{3}$ $\cot\theta=\frac{3}{4}$

⑨ 

$\sin\theta=1$ $\csc\theta=1$

$\cos\theta=0$ $\sec\theta=$ undefined.

$\tan\theta=$ und. $\cot\theta=0$

⑪ 

$(-2)^2+5^2=c^2$

$4+25=c^2$

$\sqrt{29}=c$

$\sin\theta=\frac{-2}{\sqrt{29}}=\frac{-2\sqrt{29}}{29}$ $\csc\theta=\frac{-\sqrt{29}}{2}$

$\cos\theta=\frac{5}{\sqrt{29}}=\frac{5\sqrt{29}}{29}$ $\sec\theta=\frac{\sqrt{29}}{5}$

$\tan\theta=\frac{-2}{5}$ $\cot\theta=-\frac{5}{2}$

⑬ a) +
b) +
c) +

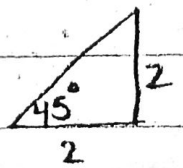
⑮ a) −
b) −
c) +

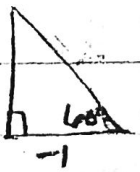
⑰ −

⑲ +

㉑ a

㉒ b





sec 4.3 cont.

(23) 

(a) $(-\sqrt{3}, -1)$

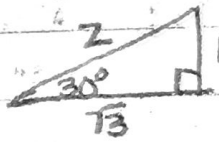
(25) 

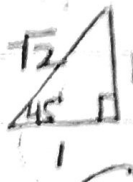
$\cos 120° = \left(-\frac{1}{2}\right)$

(27) 

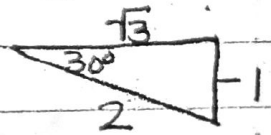
$\cos\frac{\pi}{3} = \frac{1}{2}$ $\sec\frac{\pi}{3} = (2)$

(29) $\sin\frac{13\pi}{6} = \left(\frac{1}{2}\right)$

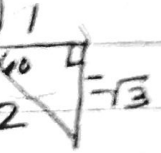


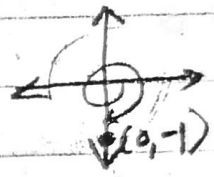
(31) $\tan -\frac{16\pi}{4} = (1)$ 

(33) $\cos\frac{23\pi}{6} = \left(\frac{\sqrt{3}}{2}\right)$ $3\frac{5}{6}\pi$

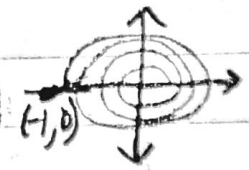


(35) $\sin\frac{4\pi}{3} = \left(-\frac{\sqrt{3}}{2}\right)$ $3\frac{2}{3}$



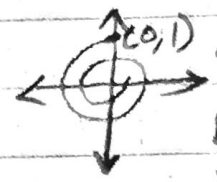
(37) 

a) $\sin\theta = -1$
b) $\cos\theta = 0$
c) $\tan\theta =$ undefined

(39) 7π 

a) $\sin\theta = 0$
b) $\cos\theta = -1$
c) $\tan\theta = 0$

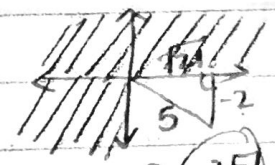
(41) $-\frac{7\pi}{2} = -3\frac{1}{2}\pi$



a) $\sin\theta = 1$
b) $\cos\theta = 0$
c) $\tan\theta =$ undefined

(43) 

$a^2 + b^2 = c^2$
$4 + 9 = c^2$
$13 = c^2$
$\sqrt{13} = c$
$\sin\theta = \frac{3}{\sqrt{13}} = \frac{3\sqrt{13}}{13} = \frac{2}{\sqrt{13}} = \frac{2\sqrt{13}}{13}$
$\tan\theta = \frac{3}{2}$ $\frac{2}{3}$

(45) 

$4 + b^2 = 25$
$b^2 = 21$
$\tan\theta = \frac{-2}{\sqrt{21}} = \frac{-2\sqrt{21}}{21}$ $\sec\theta = \left(-\frac{5}{2}\right)$

(47) 

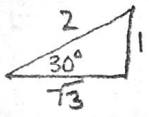
$\sec\theta = -\frac{5}{4}$
$\csc\theta = \frac{5}{3}$

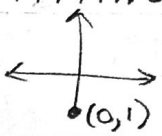
sec 4.3 cont.

(49) $\sin\left(\frac{\pi}{6} + 49{,}000\pi\right) = \frac{1}{2}$

(51) $\cos\left(\frac{5{,}555{,}555\,\pi}{2}\right)$

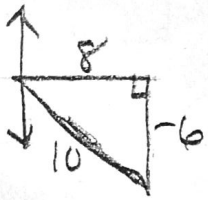
$\cos\pi\left(2777777.5\,\pi\right) = 0$





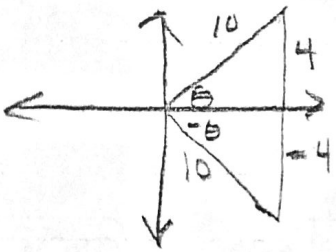
(61) 

True angles lie in either Q III or IV
in standard form would be obtuse angles

(62) 

$\sin\theta = \frac{-6}{10} = -.6$ True

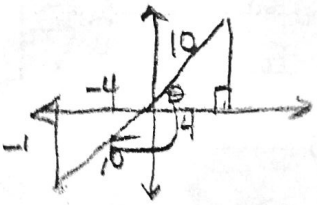
(63) $\sin\theta = -.4 = \frac{4}{10}$



$\sin(-\theta) + \csc\theta$

$-.4 + \frac{10}{4}$

$-.4 + 2.5 = 2.1$ e

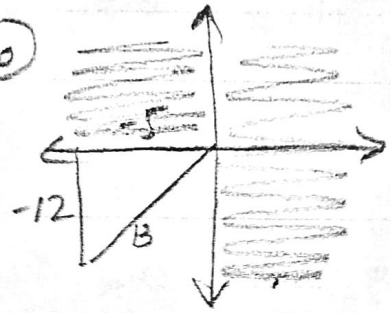
(64) 

$\cos\theta = .4$

$\cos\theta = \frac{4}{10}$

$\cos(\theta + \pi) = -.4$

(65) a)

(66) 

$\sin\theta = \frac{-12}{13}$ e