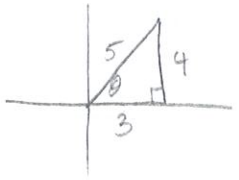
Pg 251 1-7 odd, 33-40 all

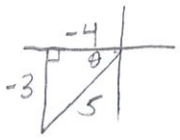
1.



$\sin\theta = \frac{4}{5}$ $\cos\theta = \frac{3}{5}$ $\tan\theta = \frac{4}{3}$

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

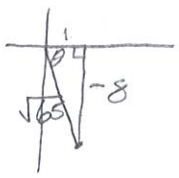
3.



$\sin\theta = -\frac{3}{5}$ $\cos\theta = -\frac{4}{5}$ $\tan\theta = \frac{3}{4}$

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

5.



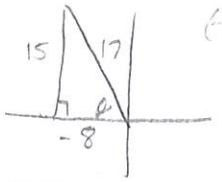
$1^2+(-8)^2=c^2$

$1+64=c^2$

$\sin\theta = \frac{-8}{\sqrt{65}} = \frac{-8\sqrt{65}}{65}$ $\cos\theta = \frac{1}{\sqrt{65}} = \frac{\sqrt{65}}{65}$ $\tan\theta = -8$

$\csc\theta = -\frac{\sqrt{65}}{-8}$ $\sec\theta = \sqrt{65}$ $\cot\theta = -\frac{1}{8}$

7.



$(-8)^2+15^2=c^2$

$64+225=c^2$

$\sin\theta = \frac{15}{17}$ $\cos\theta = -\frac{8}{17}$ $\tan\theta = -\frac{15}{8}$

$\csc\theta = \frac{17}{15}$ $\sec\theta = -\frac{17}{8}$ $\cot\theta = -\frac{8}{15}$

*

S	A
T	C

33.

$\sin$ = pos, $\cos$ = pos } Q1

$\tan\theta = \frac{2}{1} = \frac{\text{opp}}{\text{adj}}$

$1^2+2^2=c^2$

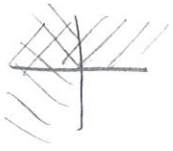
$5=c^2$

$\sqrt{5}=c$

$\sin\theta = \frac{2}{\sqrt{5}} = \frac{2\sqrt{5}}{5}$ $\cos\theta = \frac{1}{\sqrt{5}} = \frac{\sqrt{5}}{5}$ $\tan\theta = 2$

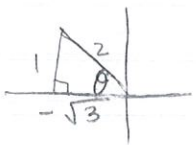
$\csc\theta = \frac{\sqrt{5}}{2}$ $\sec\theta = \sqrt{5}$ $\cot\theta = \frac{1}{2}$

34.



$\sin$ = Pos, $\cos$ = Neg } Q2

$\csc\theta = \frac{2}{1} = \frac{\text{Hyp}}{\text{opp}}$



$1^2+b^2=2^2$

$b^2=4-1$

$b^2=3$ $b=\sqrt{3}$

$\sin\theta = \frac{1}{2}$ $\cos\theta = -\frac{\sqrt{3}}{2}$ $\tan\theta = -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$

$\csc\theta = 2$ $\sec\theta = -\frac{2}{\sqrt{3}} = -\frac{2\sqrt{3}}{3}$ $\cot\theta = -\sqrt{3}$

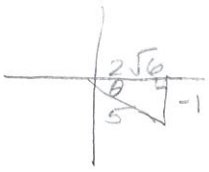
* correct Quadrant?
* check signs!

S | A
T | C

35. 

cos = Pos

$\sin\theta = -\frac{1}{5}$ $\frac{opp}{hyp}$
↳ neg.



$(-1)^2 + b^2 = 5^2$

$b^2 = 25 - 1$

$b^2 = 24$ $b = \sqrt{24} = 2\sqrt{6}$

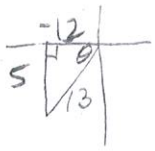
$\sin\theta = -\frac{1}{5}$ $\cos\theta = \frac{2\sqrt{6}}{5}$ $\tan\theta = -\frac{1}{2\sqrt{6}} = -\frac{\sqrt{6}}{12}$

$\csc\theta = -5$ $\sec\theta = \frac{5}{2\sqrt{6}} = \frac{5\sqrt{6}}{12}$ $\cot\theta = -2\sqrt{6}$

36. 

sin = Neg

$\cos\theta = -\frac{12}{13}$ $\frac{adj}{Hyp}$
↳ neg



$(-12)^2 + b^2 = 13^2$

$b^2 = 169 - 144$

$b^2 = 25$

$\sin\theta = -\frac{5}{13}$ $\cos\theta = -\frac{12}{13}$ $\tan\theta = \frac{5}{12}$

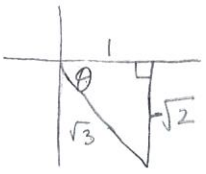
$\csc\theta = -\frac{13}{5}$ $\sec\theta = -\frac{13}{12}$ $\cot\theta = \frac{12}{5}$

37. 

$\sec\theta = \frac{\sqrt{3}}{1} = \frac{hyp}{adj}$

sin = neg

cos = pos



$1^2 + b^2 = (\sqrt{3})^2$

$b^2 = 3 - 1$

$b^2 = 2$

$\sin\theta = \frac{-\sqrt{2}}{\sqrt{3}} = \frac{-\sqrt{6}}{3}$ $\cos\theta = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$ $\tan\theta = -\sqrt{2}$

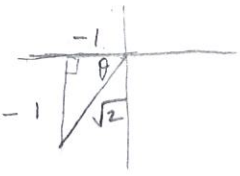
$\csc\theta = -\frac{\sqrt{3}}{\sqrt{2}} = -\frac{\sqrt{6}}{2}$ $\sec\theta = \sqrt{3}$ $\cot\theta = -\frac{1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$

38. 

$\cot\theta = \frac{1}{1} = \frac{adj}{opp}$

sin = Neg

cos = Neg



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

$1 + 1 = c^2$

$2 = c^2$

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

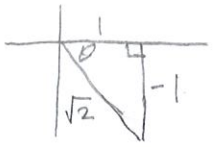
$\csc\theta = -\sqrt{2}$ $\sec\theta = -\sqrt{2}$ $\cot\theta = 1$

S | A
T | C

39. 

$\tan\theta = -1$

sin = Neg

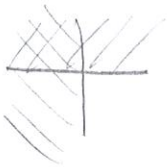


$1^2 + (-1)^2 = c^2$

$2 = c^2$

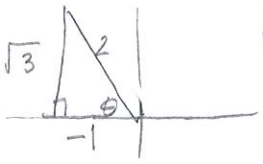
$\sin\theta = -\frac{1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$ $\cos\theta = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$ $\tan\theta = -1$

$\csc\theta = -\sqrt{2}$ $\sec\theta = \sqrt{2}$ $\cot\theta = -1$

40. 

$\cos\theta = -\frac{1}{2}$ $\frac{adj}{hyp}$

sin = Pos



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

$b^2 = 4 - 1$

$b^2 = 3$

$\sin\theta = \frac{\sqrt{3}}{2}$ $\cos\theta = -\frac{1}{2}$ $\tan\theta = -\sqrt{3}$

$\csc\theta = \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$ $\sec\theta = -2$ $\cot\theta = -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$