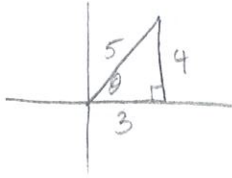


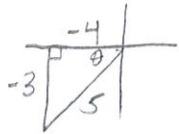
Pg 251 1-7 odd, 33-40 all

1.



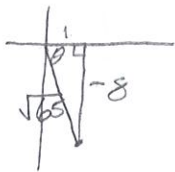
$$\begin{aligned} \sin \theta &= \frac{4}{5} & \cos \theta &= \frac{3}{5} & \tan \theta &= \frac{4}{3} \\ \csc \theta &= \frac{5}{4} & \sec \theta &= \frac{5}{3} & \cot \theta &= \frac{3}{4} \end{aligned}$$

3.



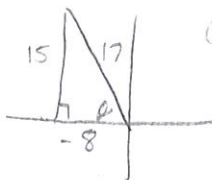
$$\begin{aligned} \sin \theta &= \frac{4}{5} & \cos \theta &= -\frac{3}{5} & \tan \theta &= -\frac{4}{3} \\ \csc \theta &= \frac{5}{4} & \sec \theta &= -\frac{5}{3} & \cot \theta &= -\frac{3}{4} \end{aligned}$$

5.

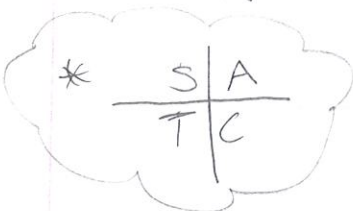


$$\begin{aligned} 1^2 + (-8)^2 &= c^2 & \sin \theta &= \frac{-8}{\sqrt{65}} = -\frac{8\sqrt{65}}{65} & \cos \theta &= \frac{1}{\sqrt{65}} = \frac{\sqrt{65}}{65} & \tan \theta &= -8 \\ 1 + 64 &= c^2 & \csc \theta &= -\frac{\sqrt{65}}{-8} & \sec \theta &= \sqrt{65} & \cot \theta &= -\frac{1}{8} \end{aligned}$$

7.



$$\begin{aligned} (-8)^2 + 15^2 &= c^2 & \sin \theta &= \frac{15}{17} & \cos \theta &= -\frac{8}{17} & \tan \theta &= -\frac{15}{8} \\ 64 + 225 &= c^2 & \csc \theta &= \frac{17}{15} & \sec \theta &= -\frac{17}{8} & \cot \theta &= -\frac{8}{15} \end{aligned}$$



33.



$$\begin{aligned} \sin &= \text{pos} \\ \cos &= \text{pos} \end{aligned} \left. \vphantom{\begin{aligned} \sin \\ \cos \end{aligned}} \right\} Q1$$

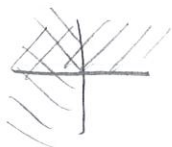
$$\tan \theta = \frac{2}{1} = \frac{\text{opp}}{\text{adj}}$$



$$\begin{aligned} 1^2 + 2^2 &= c^2 \\ 5 &= c^2 \\ \sqrt{5} &= c \end{aligned}$$

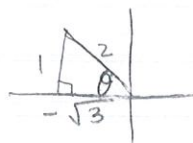
$$\begin{aligned} \sin \theta &= \frac{2}{\sqrt{5}} = \frac{2\sqrt{5}}{5} & \cos \theta &= \frac{1}{\sqrt{5}} = \frac{\sqrt{5}}{5} & \tan \theta &= 2 \\ \csc \theta &= \frac{\sqrt{5}}{2} & \sec \theta &= \sqrt{5} & \cot \theta &= \frac{1}{2} \end{aligned}$$

34.



$$\begin{aligned} \sin &= \text{pos} \\ \cos &= \text{neg} \end{aligned} \left. \vphantom{\begin{aligned} \sin \\ \cos \end{aligned}} \right\} Q2$$

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

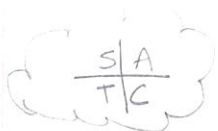
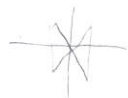


$$\begin{aligned} 1^2 + b^2 &= 2^2 \\ b^2 &= 4 - 1 \\ b^2 &= 3 & b &= \sqrt{3} \end{aligned}$$

$$\begin{aligned} \sin \theta &= \frac{1}{2} & \cos \theta &= -\frac{\sqrt{3}}{2} & \tan \theta &= -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3} \\ \csc \theta &= 2 & \sec \theta &= -\frac{2}{\sqrt{3}} = -\frac{2\sqrt{3}}{3} & \cot \theta &= -\sqrt{3} \end{aligned}$$

* Correct Quadrant?

* check signs!

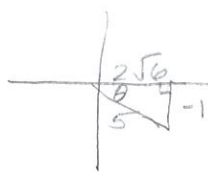


35.



cos = Pos

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



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

$$b^2 = 25 - 1$$

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

$$\sin \theta = -\frac{1}{5}$$

$$\cos \theta = \frac{2\sqrt{6}}{5}$$

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

$$\csc \theta = -5$$

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

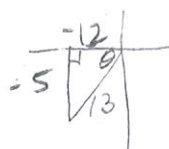
$$\cot \theta = -2\sqrt{6}$$

36.



sin = Neg

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



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

$$b^2 = 169 - 144$$

$$b^2 = 25$$

$$\sin \theta = -\frac{5}{13}$$

$$\cos \theta = -\frac{12}{13}$$

$$\tan \theta = \frac{5}{12}$$

$$\csc \theta = -\frac{13}{5}$$

$$\sec \theta = -\frac{13}{12}$$

$$\cot \theta = \frac{12}{5}$$

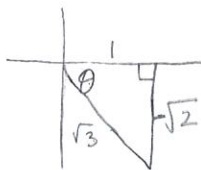
37.



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

sin = neg

cos = pos



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

$$b^2 = 3 - 1$$

$$b^2 = 2$$

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

$$\tan \theta = -\sqrt{2}$$

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

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

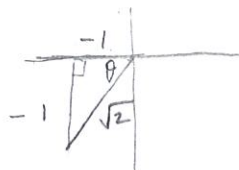
38.



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

sin = Neg

cos = Neg



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

$$1 + 1 = c^2$$

$$2 = c^2$$

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

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

$$\tan \theta = 1$$

$$\csc \theta = -\sqrt{2}$$

$$\sec \theta = -\sqrt{2}$$

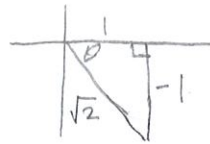
$$\cot \theta = 1$$

S/A
T/R

39.



$\tan \theta = -1$
 $\sin = \text{Neg}$

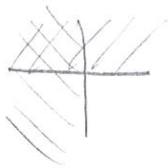


$1^2 + (-1)^2 = c^2$
 $2 = c^2$

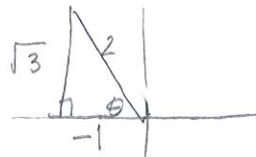
$\sin \theta = -\frac{1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$ $\cos \theta = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$ $\tan \theta = -1$

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

40.



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



$(-1)^2 + b^2 = 2^2$
 $b^2 = 4 - 1$
 $b^2 = 3$

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

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