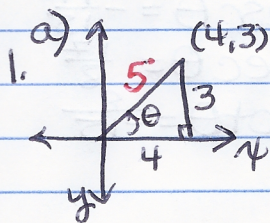


p. 318 # 1, 5, 11-14 all, 16-24(e)



$$\sin \theta = \frac{3}{5}$$

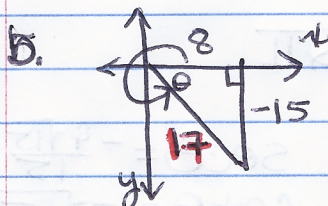
$$\cos \theta = \frac{4}{5}$$

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

$$\csc \theta = \frac{5}{3}$$

$$\sec \theta = \frac{5}{4}$$

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



$$\sin \theta = \frac{8}{17}$$

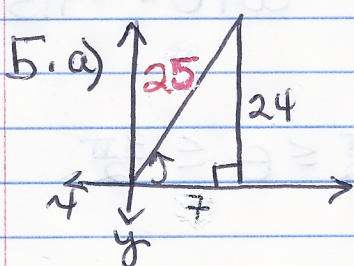
$$\cos \theta = \frac{15}{17}$$

$$\tan \theta = \frac{8}{15}$$

$$\csc \theta = \frac{17}{8}$$

$$\sec \theta = \frac{17}{15}$$

$$\cot \theta = \frac{15}{8}$$



$$\sin \theta = \frac{24}{25}$$

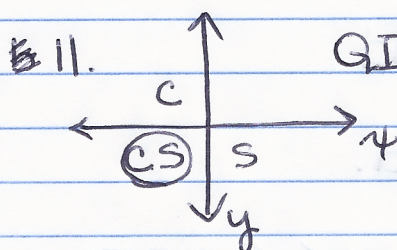
$$\cos \theta = \frac{7}{25}$$

$$\tan \theta = \frac{24}{7}$$

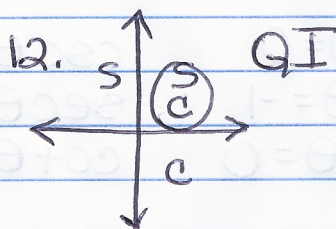
$$\csc \theta = \frac{25}{24}$$

$$\sec \theta = \frac{25}{7}$$

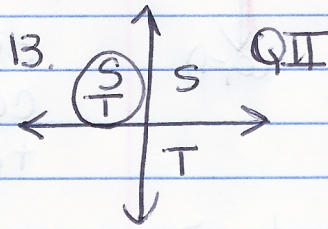
$$\cot \theta = \frac{7}{24}$$



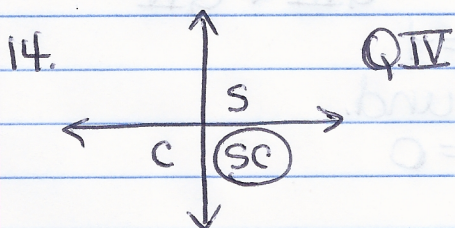
$$\sin \theta < 0; \cos \theta < 0$$



$$\sin \theta > 0; \cos \theta > 0$$

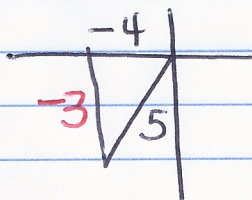


$$\sin \theta > 0; \tan \theta < 0$$



$$\sec \theta > 0; \cot \theta < 0$$

16. $\cos \theta = -\frac{4}{5}$ QIII



$$\sin \theta = \frac{3}{5}$$

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

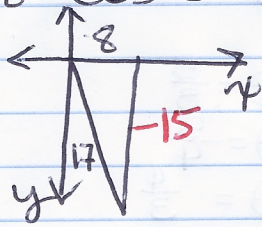
$$\csc \theta = \frac{5}{3}$$

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

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

T	C
	(C)

18. $\cos \theta = \frac{8}{17}$ $\tan \theta < 0$



$\sin \theta = -\frac{15}{17}$

$\tan \theta = -\frac{15}{8}$

QIV

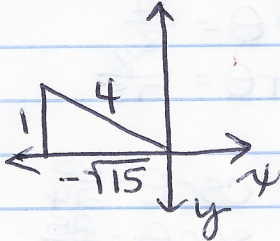
$\csc \theta = -\frac{17}{15}$

$\sec \theta = \frac{17}{8}$

$\cot \theta = -\frac{8}{15}$

(C)	csc
csc	
	cot
cot	

20. $\csc \theta = 4$ $\cot \theta < 0$ QII



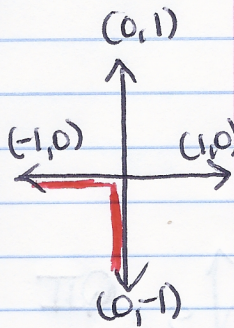
$\sin \theta = \frac{1}{4}$

$\cos \theta = -\frac{\sqrt{15}}{4}$

$\tan \theta = -\frac{\sqrt{15}}{15}$

$\sec \theta = -\frac{4\sqrt{15}}{15}$

$\cot \theta = -\sqrt{15}$



22. $\cot \theta$ is undefined $\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{2}$
 $\frac{x}{y} = \frac{1}{0} \therefore \frac{\pi}{2}$

$\sin \theta = 0$

$\csc \theta = \text{und.}$

$\cos \theta = -1$

$\sec \theta = -1$

$\tan \theta = 0$

$\cot \theta = \text{und.}$

24. $\tan \theta$ is undefined $\pi \leq \theta \leq 2\pi$

$\frac{y}{x} = \frac{-1}{0} \therefore \frac{3\pi}{2}$

QIII + QIV

$\sin \theta = -1$

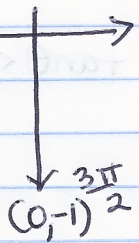
$\csc \theta = -1$

$\cos \theta = 0$

$\sec \theta = \text{und.}$

$\tan \theta = \text{und.}$

$\cot \theta = 0$



29. $\sin \pi = 0$

30. $\csc \frac{3\pi}{2} = -1$

31. $\sec \frac{3\pi}{2}$ undefined

32. $\sec \pi = -1$

33. $\sin \frac{\pi}{2} = +1$

34. $\cot \pi = \text{und}$

35. $\csc \frac{\pi}{2} = 1$

36. $\cot \frac{\pi}{2} = 0$

45. 225°

$\sin 225^\circ = -\frac{\sqrt{2}}{2}$

$\cos 225^\circ = -\frac{\sqrt{2}}{2}$

$\tan 225^\circ = 1$

46. 300°

$\sin 300^\circ = -\frac{\sqrt{3}}{2}$

$\cos 300^\circ = \frac{1}{2}$

$\tan 300^\circ = -\sqrt{3}$

47. 750°

$\frac{750}{30} = 25$
 30°

$\sin 750^\circ = \sin 30^\circ = \frac{1}{2}$

$\cos 750^\circ = \frac{\sqrt{3}}{2}$

$\tan 750^\circ = \frac{\sqrt{3}}{3}$

50. -840°

$\frac{1080}{30} = 36$
 -840
 240°

$\sin(-840^\circ) = -\frac{\sqrt{3}}{2}$

$\cos(-840^\circ) = -\frac{1}{2}$

$\tan(-840^\circ) = +\sqrt{3}$

48. -405°

$\frac{720}{30} = 24$
 -405
 315°

$\sin -405^\circ = -\frac{\sqrt{2}}{2}$

$\cos -405^\circ = \frac{\sqrt{2}}{2}$

$\tan -405^\circ = -1$

51. $\frac{4\pi}{3}$

$\sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2}$

$\cos \frac{4\pi}{3} = -\frac{1}{2}$

$\tan \frac{4\pi}{3} = \sqrt{3}$

49. -150°

$\frac{360}{30} = 12$
 -150
 210°

$\sin -150^\circ = -\frac{1}{2}$

$\cos -150^\circ = -\frac{\sqrt{3}}{2}$

$\tan -150^\circ = +\frac{\sqrt{3}}{3}$

52. $\frac{\pi}{4}$

$\sin \frac{\pi}{4} = \frac{\sqrt{2}}{2}$

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

$\tan \frac{\pi}{4} = 1$

53. $-\frac{\pi}{6}$
 $\sin^{-\frac{\pi}{6}} = -\frac{1}{2}$
 $\cos^{-\frac{\pi}{6}} = \frac{\sqrt{3}}{2}$
 $\tan^{-\frac{\pi}{6}} = -\frac{\sqrt{3}}{3}$

54. $-\frac{\pi}{2}$ (0, -1)
 $\sin^{-\frac{\pi}{2}} = -1$
 $\cos^{-\frac{\pi}{2}} = 0$
 $\tan^{-\frac{\pi}{2}}$ und.

55. $-\frac{3\pi}{2}$ (0, 1)
 $\sin \theta = 1$
 $\cos \theta = 0$
 $\tan \theta$ und

56. $\frac{10\pi}{3}$ $\frac{10\pi}{3} - \frac{6\pi}{3} = \frac{4\pi}{3}$ QIII
 $\sin \theta = -\frac{\sqrt{3}}{2}$
 $\cos \theta = -\frac{1}{2}$
 $\tan \theta = \sqrt{3}$

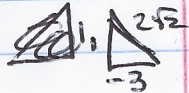
57. $-\frac{11\pi}{4}$
 $\sin \theta = \frac{\sqrt{2}}{2}$
 $\cos \theta = -\frac{\sqrt{2}}{2}$
 $\tan \theta = -1$

58. $-\frac{25\pi}{4}$ $\frac{32\pi}{4} - \frac{25\pi}{4} = \frac{7\pi}{4}$
 $\sin \theta = -\frac{\sqrt{2}}{2}$
 $\cos \theta = \frac{\sqrt{2}}{2}$
 $\tan \theta = -1$

59. $\sin \theta = \frac{3}{5}$ IV

$\cos \theta = \frac{4}{5}$
 $\sin \theta = \frac{-3}{2\sqrt{2}} = -\frac{3\sqrt{2}}{4}$

$\tan \theta = \frac{1}{3}$ 60. $\cot \theta = -3$ II



61. $\tan \theta = \frac{3}{2}$ III

$\sec \theta = -\frac{\sqrt{13}}{2}$

62. $\csc \theta = -2$ IV

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

63. $\cos \theta = \frac{5}{8}$ I

$\sec \theta = \frac{8}{5}$

64. $\sec \theta = -\frac{9}{4}$ III

$\tan \theta = -\frac{\sqrt{65}}{4}$

$\frac{81}{-16}$
 $\frac{16}{65}$