

pg. 856) # 3-7 odd, 10-14 even, 15, 16, 21-27 odd

③ $\sin\theta = \frac{12}{13}$ $\csc\theta = \frac{13}{12}$

$\cos\theta = \frac{5}{13}$ $\sec\theta = \frac{13}{5}$

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

⑤ $\sin\theta = \frac{8}{11}$ $\csc\theta = \frac{11}{8}$

$\cos\theta = \frac{\sqrt{57}}{11}$ $\sec\theta = \frac{11\sqrt{57}}{57}$

$\tan\theta = \frac{8\sqrt{57}}{57}$ $\cot\theta = \frac{\sqrt{57}}{8}$

⑦ $\sin\theta = \frac{\sqrt{115}}{14}$ $\csc\theta = \frac{14\sqrt{115}}{115}$

$\cos\theta = \frac{9}{14}$ $\sec\theta = \frac{14}{9}$

$\tan\theta = \frac{\sqrt{115}}{9}$ $\cot\theta = \frac{9\sqrt{115}}{115}$

⑩ $\sin\theta = \frac{\sqrt{39}}{8}$ $\csc\theta = \frac{8\sqrt{39}}{39}$

$\tan\theta = \frac{\sqrt{39}}{5}$ $\sec\theta = \frac{8}{5}$

$\cot\theta = \frac{5\sqrt{39}}{39}$

⑫ $\sin\theta = \frac{7}{10}$ $\tan\theta = \frac{7\sqrt{51}}{51}$ $\cot\theta = \frac{\sqrt{51}}{7}$

$\cos\theta = \frac{\sqrt{51}}{10}$ $\sec\theta = \frac{10\sqrt{51}}{51}$

⑮ C

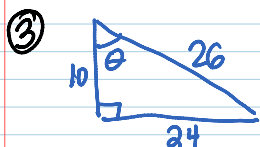
⑯ csc is not the reciprocal of cosine; it is the reciprocal of sine

⑳ $B = 55^\circ$
 $a \approx 9.18$
 $b \approx 13.11$

㉓ $A = 72^\circ$
 $a \approx 22.83$
 $b \approx 7.42$

㉕ $A = 15^\circ$
 $b \approx 55.98$
 $c \approx 57.96$

㉗ $B = 26^\circ$
 $a \approx 65.61$
 $c \approx 73.0$



$$10^2 + 24^2 = c^2$$
$$676 = c^2$$
$$26 = c$$

$$\sin\theta = \frac{24}{26} = \frac{12}{13}$$

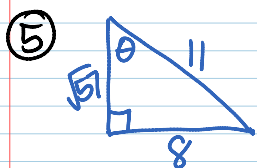
$$\cos\theta = \frac{10}{26} = \frac{5}{13}$$

$$\tan\theta = \frac{24}{10} = \frac{12}{5}$$

㉘

$$n^2 + 9^2 = 112$$

$$\csc A = 8$$



$$a^2 + 8^2 = 11^2$$

$$a^2 + 64 = 121$$

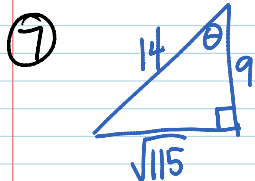
$$a^2 = 57$$

$$a = \sqrt{57}$$

$$\sin \theta = \frac{8}{11}$$

$$\cos \theta = \frac{\sqrt{57}}{11}$$

$$\tan \theta = \frac{8}{\sqrt{57}} \cdot \frac{\sqrt{57}}{\sqrt{57}} = \frac{8\sqrt{57}}{57}$$



$$a^2 + 9^2 = 14^2$$

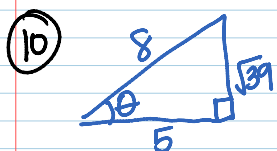
$$a^2 + 81 = 196$$

$$a^2 = 115$$

$$a = \sqrt{115}$$

$$\sin \theta = \frac{\sqrt{115}}{14}$$

$$\cos \theta = \frac{9}{14} \quad \tan \theta = \frac{\sqrt{115}}{9}$$

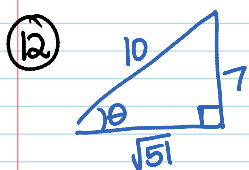


$$5^2 + b^2 = 8^2$$

$$b = \sqrt{39}$$

$$\sin \theta = \frac{\sqrt{39}}{8}$$

$$\tan \theta = \frac{\sqrt{39}}{5}$$



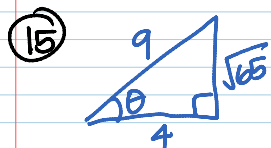
$$7^2 + b^2 = 10^2$$

$$b^2 = 51$$

$$\sin \theta = \frac{7}{10}$$

$$\cos \theta = \frac{\sqrt{51}}{10}$$

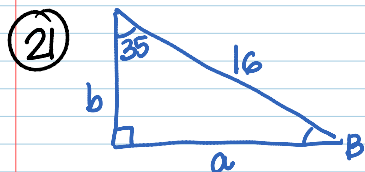
$$\tan \theta = \frac{7}{\sqrt{51}} \cdot \frac{\sqrt{51}}{\sqrt{51}} = \frac{7\sqrt{51}}{51}$$



$$4^2 + b^2 = 9^2$$

$$b = \sqrt{65}$$

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



$$\sin 35 = \frac{a}{16}$$

$$16 \sin 35 = a$$

$$9.18 = a$$

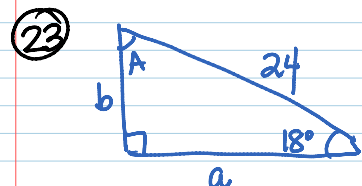
$$\cos 35 = \frac{b}{16}$$

$$16 \cos 35 = b$$

$$13.11 = b$$

$$B = 180 - (35 + 90)$$

$$B = 55^\circ$$



$$A = 180 - (90 + 18)$$

$$A = 72^\circ$$

$$\sin 18 = \frac{b}{24}$$

$$24 \sin 18 = b$$

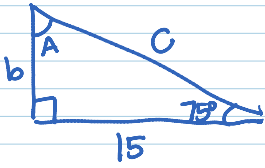
$$7.42 = b$$

$$\cos 18 = \frac{a}{24}$$

$$24 \cos 18 = a$$

$$a = 22.83$$

25



$$A = 180 - (90 + 75)$$
$$A = 15^\circ$$

$$\cos 75^\circ = \frac{15}{C}$$

$$C \cos 75 = 15$$

$$C = \frac{15}{\cos 75}$$

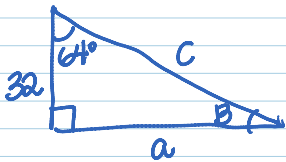
$$C \approx 57.96$$

$$\tan 75 = \frac{b}{15}$$

$$15 \tan 75 = b$$

$$b \approx 55.98$$

27



$$B = 180 - (90 + 64)$$
$$B = 26^\circ$$

$$\cos 64 = \frac{32}{C}$$

$$C = \frac{32}{\cos 64}$$

$$C \approx 73.0$$

$$\tan 64 = \frac{a}{32}$$

$$32 \tan 64 = a$$

$$a \approx 65.61$$