

I
① B

④ B

⑦ C

② D

⑤ B

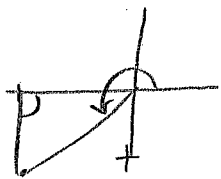
⑧ D

③ B

⑥ B

⑨ D

II
#10



Given: $(-12, -5)$

$$\begin{aligned} x = -12 \\ y = -5 \end{aligned} \Rightarrow r = \sqrt{x^2 + y^2} = \sqrt{(-12)^2 + (-5)^2} = \sqrt{144 + 25} = \sqrt{169} = 13$$

So

$$\sin(\theta) = \frac{y}{r} = \frac{-5}{13}$$

$$\cos(\theta) = \frac{x}{r} = \frac{-12}{13}$$

$$\tan(\theta) = \frac{y}{x} = \frac{-5}{-12} = \frac{5}{12}$$

#11. Given: $\angle A = 44^\circ$

$\angle C = 90^\circ$

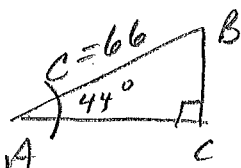
$c = 66$

Find

$$\angle B = 46^\circ$$

$$a = 45.85$$

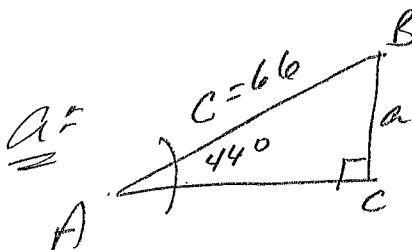
$$b = 47.48$$



$$\angle B = \angle B = 90 - \angle A$$

$$= 90 - 44$$

$$= 46^\circ$$



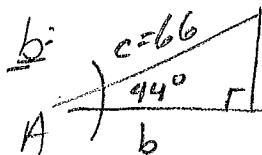
$$\text{choose } \sin(44^\circ) = \frac{a}{66}$$

$$\Rightarrow a = 66 \sin(44^\circ)$$

$$= 66(.694658\dots)$$

$$= 45.84745\dots$$

$$\approx 45.85$$



$$\text{choose } \cos(44^\circ) = \frac{b}{66}$$

$$\Rightarrow b = 66 \cos(44^\circ)$$

$$= 66(.719339\dots)$$

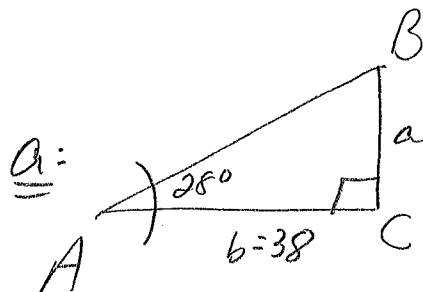
$$= 47.47642\dots$$

$$\approx 47.48$$

#12, Given: $\angle A = 28^\circ$
 $\angle C = 90^\circ$
Find: $b = 38$

$$\begin{aligned}\angle B &= 62^\circ \\ A &= 20.20 \\ c &= 43.04\end{aligned}$$

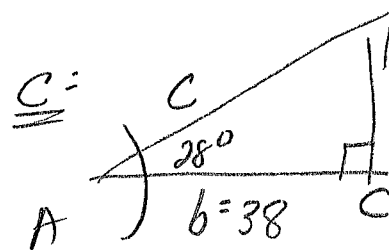
$$\begin{aligned}\angle B &= 90 - \angle A \\ &= 90 - 28 \\ &= \boxed{62^\circ}\end{aligned}$$



$$\text{Choose } \tan(28^\circ) = \frac{a}{38}$$

$$\begin{aligned}\Rightarrow a &= 38 \cdot \tan(28^\circ) \\ &= 38(.531709...) \\ &= 20.20495... \\ &\approx \boxed{20.20}\end{aligned}$$

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Form #1ne



$$\text{Choose } \cos(28^\circ) = \frac{38}{c}$$

$$\begin{aligned}\Rightarrow c \cdot \cos(28^\circ) &= 38 \\ \Rightarrow c &= \frac{38}{\cos(28^\circ)} \\ &= \frac{38}{.882947...} \\ &= 43.03766... \\ &\approx \boxed{43.04}\end{aligned}$$