

TRIGONOMETRY Quiz #1ne
FALL 2023 FORM #2WO

pg 1ne

I
①. D

②. D

③. B

④. D

⑤. B

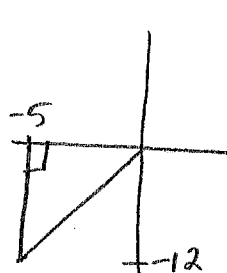
⑥. B

⑦. B

⑧. B

⑨. C

II
#10



Given: $(-5, -12)$

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

$$\Rightarrow \sqrt{169} \\ = 13$$

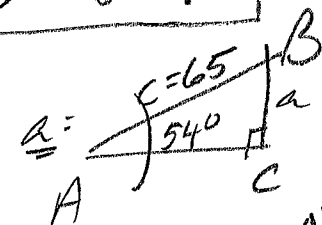
$$\begin{aligned} \sin(\theta) &= \frac{y}{r} = \frac{-12}{13} \\ \cos(\theta) &= \frac{x}{r} = \frac{-5}{13} \\ \tan(\theta) &= \frac{y}{x} = \frac{-12}{-5} = \frac{12}{5} \end{aligned}$$

#11 Given: FIND:

$$\begin{aligned} \angle A &= 54^\circ \\ \angle C &= 90^\circ \\ c &= 65 \end{aligned}$$

$$\begin{aligned} \angle B &= 36^\circ \\ a &= 52.59 \\ b &= 38.21 \end{aligned}$$

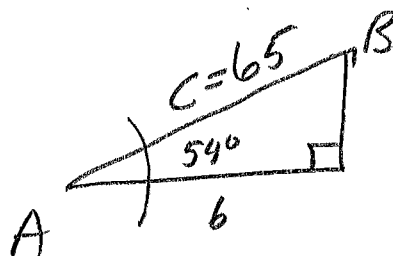
$$\begin{aligned} \angle B &= 90 - \angle A \\ &= 90 - 54 \\ &= 36^\circ \end{aligned}$$



$$\begin{aligned} \text{Choose } \sin(\theta) &= \frac{a}{c} \\ \Rightarrow \sin(54^\circ) &= \frac{a}{65} \end{aligned}$$

$$\begin{aligned} \Rightarrow a &= 65 \cdot \sin(54^\circ) \\ &= 65(.8090169...) \\ &= 52.586104... \\ &\approx \boxed{52.59} \end{aligned}$$

b =



$$\text{Choose } \cos(54^\circ) = \frac{b}{65}$$

$$\begin{aligned} \Rightarrow b &= 65 \cdot \cos(54^\circ) \\ &= 65(.587785...) \\ &= 38.206041... \\ &\approx \boxed{38.21} \end{aligned}$$

#12) Given:

$$\angle A = 22^\circ$$

$$\angle C = 90^\circ$$

$$b = 33$$

Find

$$\angle B = 68^\circ$$

$$a = 13.33$$

$$c = 35.59$$

Pg two
Form #two

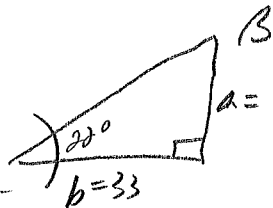
$\angle B$:

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

$$= 90 - 22$$

$$= 68^\circ$$

a :



Choose

$$\tan(22^\circ) = \frac{a}{33}$$

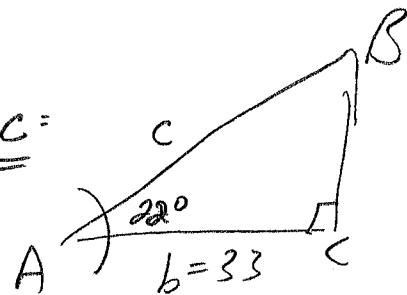
$$\Rightarrow a = 33 \cdot \tan(22^\circ)$$

$$= 33(.404026 \dots)$$

$$= 13.3328 \dots$$

$$\approx \boxed{13.33}$$

c :



Choose

$$\cos(22^\circ) = \frac{33}{c}$$

cross-multiply

$$\Rightarrow c \cdot \cos(22^\circ) = 33$$

$$\Rightarrow c = \frac{33}{\cos(22^\circ)}$$

$$= \frac{33}{.927183 \dots}$$

$$= 35.55164 \dots$$

$$\approx \boxed{35.59}$$