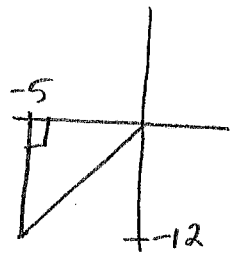
TRIGONOMETRY Quiz #1re
FALL 2023 FORM #2W0

I

1. D
2. D
3. B
4. D
5. B
6. B
7. B
8. B
9. C

II

#10



Given: $(-5,-12)$

$x=-5$, $y=-12$ $\Rightarrow r=\sqrt{x^2+y^2}$

$=\sqrt{(-5)^2+(-12)^2}$

$=\sqrt{25+144}$

$=\sqrt{169}$

$=13$

So

$\sin(\theta)=\frac{y}{r}=\boxed{\frac{-12}{13}}$ $\cos(\theta)=\frac{x}{r}=\boxed{\frac{-5}{13}}$ $\tan(\theta)=\frac{y}{x}=\boxed{\frac{-12}{-5}}=\boxed{\frac{12}{5}}$

#11 Given: FIND:

$\angle A=54^\circ$, $\angle C=90^\circ$, $c=65$

$\angle B=36^\circ$

$a=52.59$

$b=38.21$

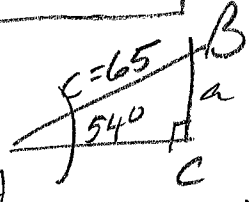
$\angle B$:

$\angle B=90-\angle A$

$=90-54$

$=36^\circ$

a:



choose $\sin(\theta)=\frac{a}{65}$

$\Rightarrow \sin(54^\circ)=\frac{a}{65}$

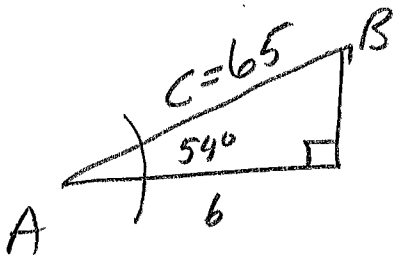
$\Rightarrow a=65\cdot\sin(54^\circ)$

$=65(.809169\ldots)$

$=52.586104\ldots$

$\approx \boxed{52.59}$

b:



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

$\Rightarrow b=65\cdot\cos(54^\circ)$

$=65(.587785\ldots)$

$=38.206041\ldots$

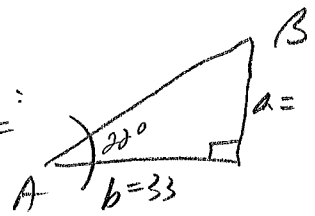
$\approx \boxed{38.21}$

#12) Given:
$\angle A = 22°$
$\angle C = 90°$
$b = 33$

Find
$\angle B = 68°$
$a = 13.33$
$c = 35.59$

$\angle B$:
$\angle B = 90 - \angle A$
$= 90 - 22$
$= 68°$

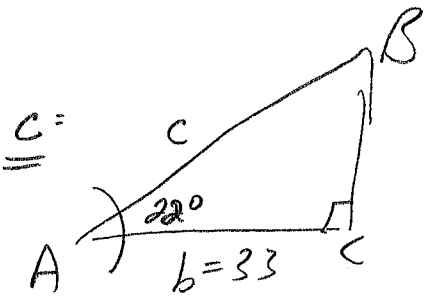
a:



Choose
$\tan(22°) = \frac{a}{33}$

$\Rightarrow a = 33 \cdot \tan(22°)$
$= 33(.404026\ldots)$
$= 13.3328\ldots$
$\approx \boxed{13.33}$

c:



Choose
$\cos(22°) = \frac{33}{c}$

cross-multiply
$\Rightarrow c \cdot \cos(22°) = 33$

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

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

$= 35.55164\ldots$

$\approx \boxed{35.59}$