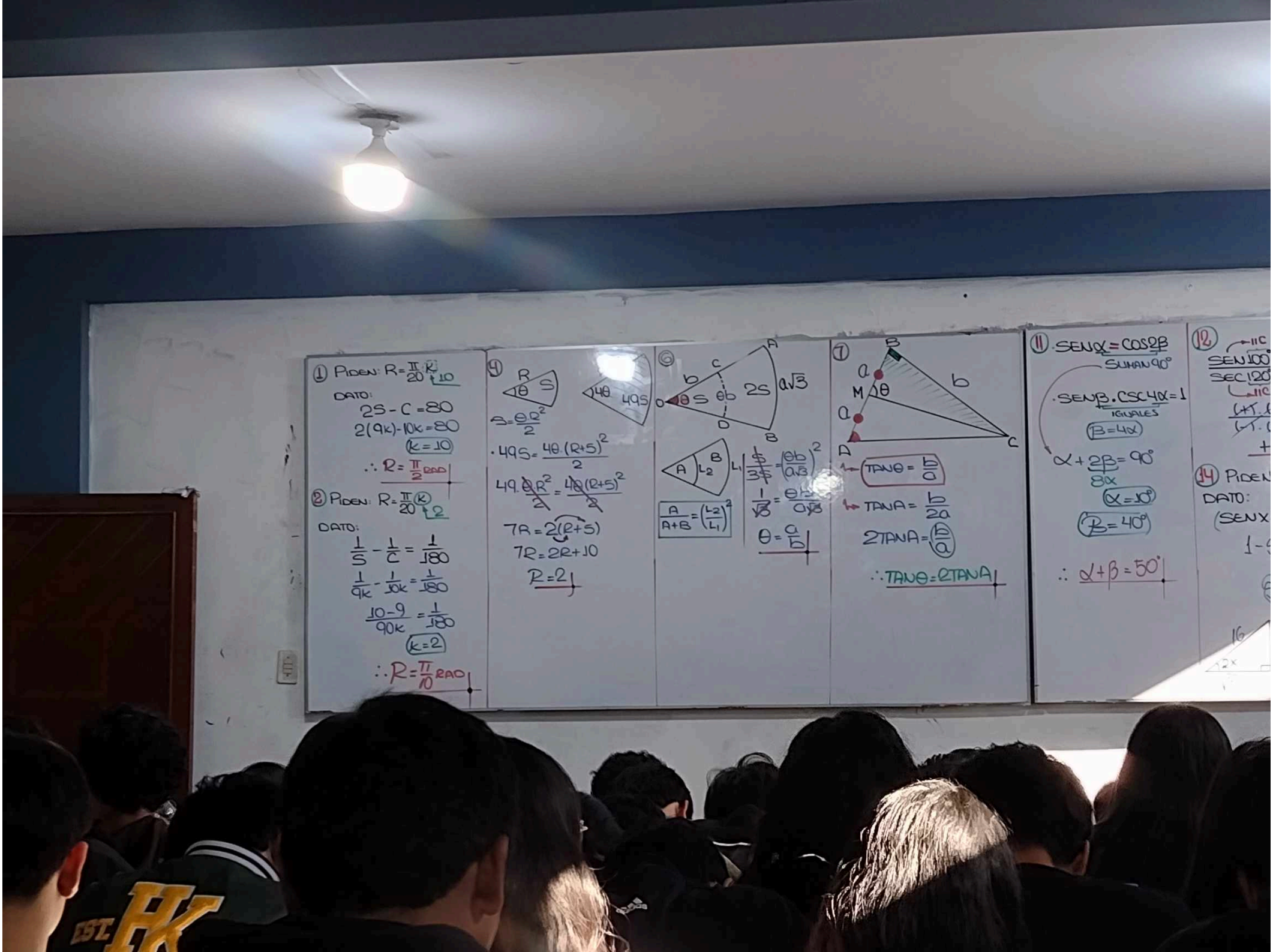
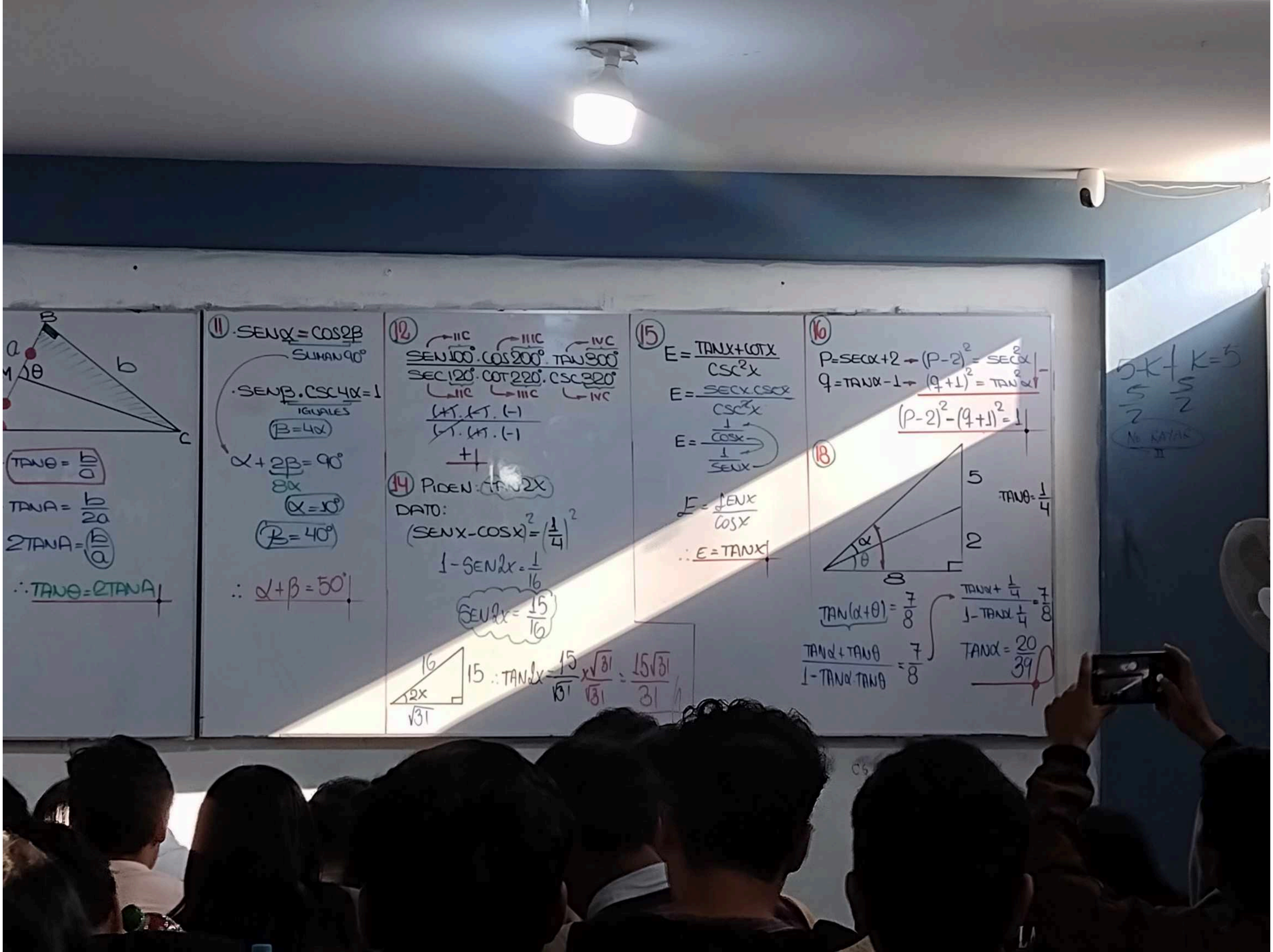
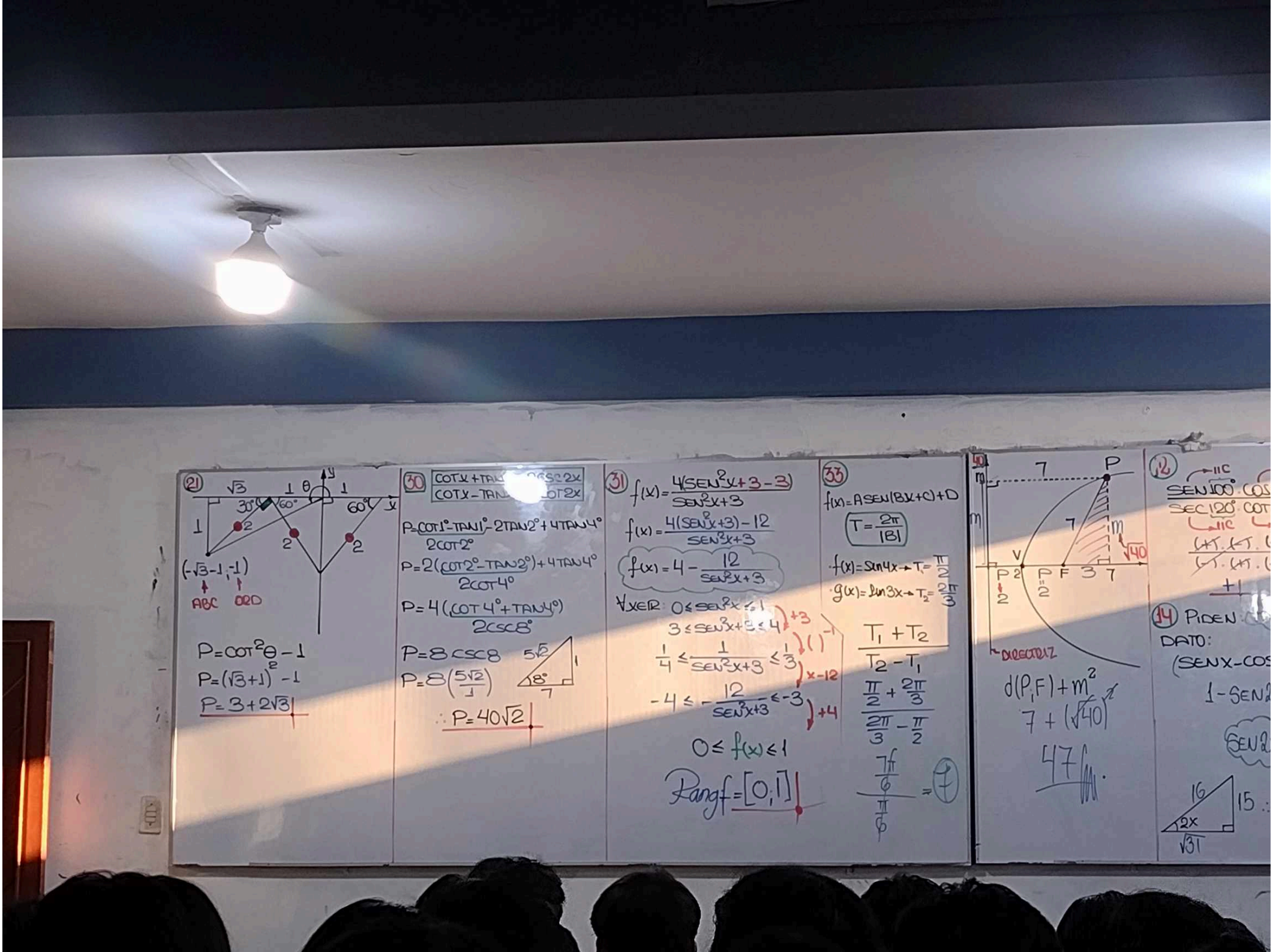

① PIDEN: $R=\frac{\pi}{20}K$
DATO:
$2S-C=80$
$2(9k)-10k=80$
$k=10$
$\therefore R=\frac{\pi}{2}$ RAD
② PIDEN: $R=\frac{\pi}{20}k$
DATO:
$\frac{1}{S}-\frac{1}{C}=\frac{1}{180}$
$\frac{1}{9k}-\frac{1}{10k}=\frac{1}{180}$
$\frac{10-9}{90k}=\frac{1}{180}$
$k=2$
$\therefore R=\frac{\pi}{10}$ RAD
④
$S=\frac{\theta R^2}{2}$
$49S=\frac{4\theta(R+5)^2}{2}$
$7R=2(R+5)$
$7R=2R+10$
$R=2$
⑥
$\frac{A}{A+B}=\left(\frac{L_2}{L_1}\right)^2$
$\frac{S}{3S}=\left(\frac{\theta b}{a\sqrt{3}}\right)^2$
$\frac{1}{\sqrt{3}}=\frac{\theta b}{a\sqrt{3}}$
$\theta=\frac{a}{b}$
⑦
$\tan\theta=\frac{b}{a}$
$\tan\alpha=\frac{b}{2a}$
$2\tan\alpha=\frac{b}{a}$
$\therefore \tan\theta=2\tan\alpha$
⑪ $\operatorname{sen}\alpha=\cos 2\beta$
SUMAN 90°
$\operatorname{sen}\beta.\csc 4\alpha=1$
IGUALES
$\beta=4\alpha$
$\alpha+2\beta=90°$
8α
$\alpha=10°$
$\beta=40°$
$\therefore \alpha+\beta=50°$
⑫
$\frac{\operatorname{sen}100°}{\sec 120°}$
⑭ PIDEN
DATO:
(SENX


TANθ = b/a
TANA = b/2a
2TANA = b/a
∴ TANθ = 2TANA
11 · SENα = COS2β
SUMAN 90°
· SENβ · CSC4α = 1
IGUALES
β = 4α
α + 2β = 90°
8α
α = 10°
β = 40°
∴ α + β = 50°
12
IIC IIIC IVC
SEN100° · COS200° · TAN300°
SEC120° · COT220° · CSC320°
IIC IIIC IVC
(+) · (-) · (-)
(-) · (+) · (-)
+1
14 PIDEN: TAN2X
DATO:
(SENX - COSX)^2 = (1/4)^2
1 - SEN2x = 1/16
SEN2x = 15/16
16
15
2X
√31
∴ TAN2x = 15/√31 x √31/√31 = 15√31/31
15
E = TANX + COTX / CSC^2x
E = SECx.CSCx / CSC^2x
E = (1/COSx) / (1/SENx)
E = SENx / COSx
∴ E = TANx
16
P = SECα + 2 → (P-2)^2 = SEC^2α
q = TANα - 1 → (q+1)^2 = TAN^2α
(P-2)^2 - (q+1)^2 = 1
18
5
2
8
α
θ
TANθ = 1/4
TAN(α+θ) = 7/8
TANα + TANθ / 1 - TANα.TANθ = 7/8
TANα + 1/4 / 1 - TANα 1/4 = 7/8
TANα = 20/39


21
$\sqrt{3}$
1
θ
y
x
30°
60°
60°
1
2
2
2
$(-\sqrt{3}-1;-1)$
ABC
QRD
$P=\cot^2\theta-1$
$P=(\sqrt{3}+1)^2-1$
$P=3+2\sqrt{3}$
30
$\frac{\cot x+\tan x}{\cot x-\tan x}=\frac{\csc 2x}{\cot 2x}$
$P=\frac{\cot 1^\circ-\tan 1^\circ-2\tan 2^\circ+4\tan 4^\circ}{2\cot 2^\circ}$
$P=2\left(\frac{\cot 2^\circ-\tan 2^\circ}{2\cot 4^\circ}\right)+4\tan 4^\circ$
$P=4\left(\frac{\cot 4^\circ+\tan 4^\circ}{2\csc 8^\circ}\right)$
$P=8\csc 8$
$P=8\left(\frac{5\sqrt{2}}{1}\right)$
$\therefore P=40\sqrt{2}$
5√5
1
8°
7
31
$f(x)=\frac{4(\sen^2x+3-3)}{\sen^2x+3}$
$f(x)=\frac{4(\sen^2x+3)-12}{\sen^2x+3}$
$f(x)=4-\frac{12}{\sen^2x+3}$
$\forall x\in\mathbb{R}: 0\le\sen^2x\le 1$
$3\le\sen^2x+3\le 4$ (+3)
$\frac{1}{4}\le\frac{1}{\sen^2x+3}\le\frac{1}{3}$ (()$^{-1}$)
$-4\le-\frac{12}{\sen^2x+3}\le-3$ (x-12)
$0\le f(x)\le 1$ (+4)
$\text{Ran}f=[0;1]$
33
$f(x)=A\sen(Bx+C)+D$
$T=\frac{2\pi}{|B|}$
$f(x)=\sen 4x\to T_1=\frac{\pi}{2}$
$g(x)=\sen 3x\to T_2=\frac{2\pi}{3}$
$\frac{T_1+T_2}{T_2-T_1}$
$\frac{\frac{\pi}{2}+\frac{2\pi}{3}}{\frac{2\pi}{3}-\frac{\pi}{2}}$
$\frac{\frac{7\pi}{6}}{\frac{\pi}{6}}=7$
m
7
P
7
m
$\sqrt{40}$
V
P
2
F
3
7
DIRECTRIZ
$d(P;F)+m^2$
$7+(\sqrt{40})^2$
47 m.
12
SEN100° COS
SEC120° COT
IIC
IIC
+1
14
PIDEN
DATO:
(SENX-COS
1-SEN
SEN
16
15
2x
$\sqrt{31}$