NO.

Date 4.7.

习题2.5

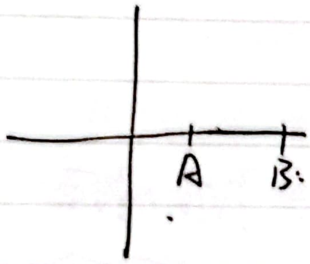
3. 将P(2,1)代入, $4+k^2-6-k-4=0 \Rightarrow k=3$ 或 -2.

4. 设$P(x,y)$, $A(x_1,y_1)$ $B(x_2,y_2)$

$\therefore \begin{cases} x_1+x_2=2x \\ y_1+y_2=2y \end{cases}$ $\sqrt{(x_1-x_2)^2+(y_1-y_2)^2}=4$

$\therefore x^2+y^2=4$

5.



设$C(x,y)$

$\therefore CA=\frac{1}{2}CB$

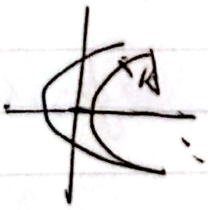
$\therefore \sqrt{(x-2)^2+y^2}=\frac{1}{2}\sqrt{(x-8)^2+y^2}$

$4(x-2)^2+4y^2=(x-8)^2+y^2$

$3x^2+16-64+3y^2=0$

$x^2+y^2=16$

6.7

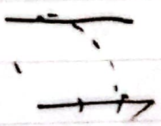


设$P(x_1,y_1)$ $B(x_2,y_2)$, $A(3,1)$.

$\therefore \begin{cases} x_1-3=2x_2 \\ y_1-1=2y_2 \end{cases} \Rightarrow \begin{cases} x_2=\frac{x_1-3}{2} \\ y_2=\frac{y_1-1}{2} \end{cases}$

$\Rightarrow \cancel{x_2^2}\ y_2^2=x_2+1 \Rightarrow \frac{(y_1-1)^2}{4}=\frac{x_1-3}{2}+1$.

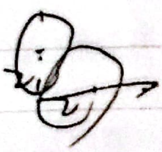
8.



$\cancel{\frac{2}{\sin(\pi-\beta)}=}$ $\frac{\rho}{\sin(\pi)}=\frac{2}{\sin\frac{\pi}{2}}$

$\rho=0$.

9.



$r_1r_2=2\sqrt{2}$.

NO.

$2y=t-x$

Date

B $x^2+(x-t)^2=4$ $y=-\frac{1}{3}x+\frac{t}{3}$ 设 $x\ 3y+x+2=0$ $y=3x+t$ $3x-y+t=0$

$x^2+x^2-2tx+t^2=4$. $4t^2-4\cdot 2\cdot(t^2-4)=0$ $-4t^2+32=0$ $t^2=8$

2、$C_1=(x-1)^2+(y+1)^2=1$ $C_2=(x+2)^2+y^2=5$.

∴ $C_1(1,-1)$ $C_2(-2,0)$.

∴ $l: y+\frac{1}{2}=3(x+\frac{1}{2})$.

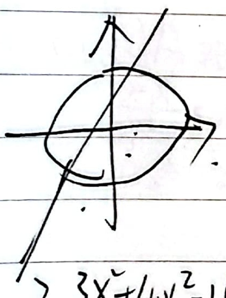
3. $\begin{cases}3x^2+4y^2=12\\4x^2+3y^2=12\end{cases}$ ∴ $\begin{cases}x=\sqrt{\frac{12}{7}}\\y=\sqrt{\frac{12}{7}}\end{cases}$ $\begin{cases}x=-\sqrt{\frac{12}{7}}\\y=\sqrt{\frac{12}{7}}\end{cases}$ $\begin{cases}x=-\sqrt{\frac{12}{7}}\\y=-\sqrt{\frac{12}{7}}\end{cases}$ $\begin{cases}x=\sqrt{\frac{12}{7}}\\y=-\sqrt{\frac{12}{7}}\end{cases}$

∴ 共圆.

4. $\begin{cases}x^2+4y^2=4\\x+2y-t=0\end{cases}$ ∴ $h_{max}=\frac{|-2+t|}{\sqrt{5}}=\frac{2}{5}\sqrt{10}+\frac{2}{5}\sqrt{5}$

$\Rightarrow \Delta=0$

~~∴ t~~ ∴ $t=\pm\sqrt{8}$

6.  设 $A(x_1,y_1)$ $B(x_2,y_2)$, $l_{AB}: y=-\frac{1}{4}x+t$.

∴ $\frac{x_1+x_2}{2}\cdot 4+m=\frac{y_1+y_2}{2}$.

∴ $m=\frac{12}{13}t+\frac{44}{13}\cdot 4t=\frac{188}{13}t$.

$m\in(-\frac{1}{2}\sqrt{2},\frac{1}{2}\sqrt{2})$

$\begin{cases}3x^2+4y^2=16\\4y-4t=x\end{cases}$

$\Rightarrow 52y^2-96ty+48t^2-16=0$

$\begin{cases}x_1+x_2=-\frac{44}{13}t\\y_1+y_2=-\frac{b}{a}=-\frac{-96t}{52}=\frac{24}{13}t\end{cases}$

$\Delta>0$

$(96t)^2-4\cdot 52(48t^2-16)>0$