$$
\begin{gathered}
9-16-13 \\
5^{2 n} 600
\end{gathered}
$$

Questions from $\mathrm{Ch} / \mathrm{PH} 2$
(16)


$$
\begin{aligned}
& a^{2}+b^{2}=c^{2} \\
& 1 a^{2}+4^{2}=c^{2} \\
& 14 \psi+16-c^{2} \\
& \sqrt{160} \cdot \sqrt{c^{2}} \\
& 1.6 \approx c
\end{aligned}
$$

(3) midpoint $(8,2)(1,6)$

$$
\begin{aligned}
& \text { midpoint }=\left(\frac{8+1}{2}, \frac{7+6}{2}\right) \\
&\left(4 \frac{1}{2}, 6 \frac{1}{2}\right) \\
& \text { m.dpolnt: }\left(\frac{x_{1}+y_{2}}{2}, \frac{y_{1}+y_{2}}{2}\right)
\end{aligned}
$$

(2)

$A D+O B=A B$

$$
\begin{aligned}
& \left.\begin{array}{r}
\downarrow \\
A D\binom{\downarrow}{3} \\
=4 n \\
-3
\end{array}\right) \\
& \hline A D \quad=4 n-3
\end{aligned}
$$

(17) $A=(3,5) \quad B=(5,15)$

Whet is $A B$ ?

$$
\begin{aligned}
D & =\sqrt{\Delta x^{2}+\Delta y^{2}} \\
& =\sqrt{2^{2}+10^{2}} \\
& =\sqrt{4+100} \\
& =\sqrt{104} \\
& \approx 10.2
\end{aligned}
$$

(21) $\angle D B C=21^{\circ}$

$$
\angle F B C=\text { ? } 84
$$


(22) $\angle E B D=4 n+16 \quad \angle D B C=8 n+12$ $\angle E B C 40^{\circ}$

$$
\begin{aligned}
& 8 n+12=4 n+16 \\
& \begin{array}{r}
-4 n+12=4 n \\
4 n+12=16 \\
-12=12
\end{array} \\
& \frac{-12-12}{4 n=4} \\
& n=1
\end{aligned}
$$

(24)


$$
\begin{gathered}
3 n-24=2 n+6 \\
\frac{2 n}{} \quad \angle 2 n \\
\begin{array}{l}
n-24=6 \\
+24+24
\end{array} \\
n=30
\end{gathered}
$$

(20) $C$ is between $X$ and $Y$

$$
\left.\begin{array}{rl}
\dot{x} \quad \dot{y} \\
x c+c y & =x y \\
\downarrow \\
\downarrow
\end{array}\right) \quad \begin{aligned}
& \bullet \\
& 6 n-4+2 n+1=x y \\
& 8 n-3=x y
\end{aligned}
$$

(7) $\angle A+\angle B=90 \quad \angle A=$ ?
$n+6+8 n-6=90^{\circ}$
$9_{n}=90^{\circ}$
$n=10$
$\therefore \angle A=10+6=16$
(8) $D$ is becween $A$ and $B$.

(20)

$$
\begin{aligned}
& 21 \\
& a^{2}+b^{2}=c^{2} \\
& 20^{2}+21^{2}=c^{2} \\
& 400+41=c^{2} \\
& \sqrt{841}=k^{2} \\
& c=29
\end{aligned}
$$

(II)

(13) $(-5,-1)(-7.7)$

$$
\begin{aligned}
\text { midpoint }= & \left(\frac{-5+-7}{2}, \frac{-1+7}{2}\right) \\
& \left(\frac{-12}{2}, \frac{6}{2}\right) \\
& (-6,3)
\end{aligned}
$$

(9) $B$ is between $A$ and $C$


$$
\begin{aligned}
& A B+B C=A C \\
& \downarrow \downarrow \downarrow \\
& \downarrow B+n+1)=6 n \\
& \left.\begin{array}{c}
1-1 \\
-n-1 \\
A B=
\end{array}\right) 5 n-1
\end{aligned}
$$

$$
\begin{aligned}
& 9-16-13 \\
& 6^{20} \text { bed }
\end{aligned}
$$

Ch. 1 P7 2 ?'s
(2) If $D$ is between $A$ and $B$ witn $A B=4 n$ and $B D=3$, what is $A D$ ?


$$
\left.\begin{array}{rl}
A D+D B & =A B \\
\downarrow \\
\downarrow
\end{array}\right)=\begin{aligned}
A D+3 & =4 n \\
-3 & -3 \\
\hline A D & =4 n-3
\end{aligned}
$$

(22)

$$
\begin{aligned}
& \angle E B D=4 n+16 \\
& \angle D B C=8 n+12 \\
& \text { numerisul of } \angle E B C 40^{\circ}
\end{aligned}
$$



$$
\begin{gathered}
8 n+12=4 n+16 \\
-4 n \quad-4 n \\
\hline 4 n+12=16 \\
-12=12 \\
\hline 4 n=4 \\
n=1
\end{gathered}
$$

(21)

$$
\angle D B C=21^{\circ} \quad \angle F B C=? 84
$$


(1)

$$
\begin{aligned}
A= & (3.5)(7.6) \\
D & =\sqrt{\Delta x^{2}+\Delta y^{2}} \\
& =\sqrt{4^{2}+1^{2}} \\
& \sqrt{16+1} \\
& \sqrt{17} \\
& \approx 4.1
\end{aligned}
$$

(19) $B$ is midpoint of $\overline{A C}$ with $A B=5 n-2$ and $B C=3 n+8$. what is $n$ ?


$$
\begin{gathered}
5 n-2=3 n+8 \\
-3 n \quad-3 \\
\hline 2 n-2=8 \\
+2+2
\end{gathered}
$$

30

(17) $A=(3.5) \quad B=(5,15)$ What is $A B$ ?

$$
\begin{aligned}
D & =\sqrt{\Delta x^{2}+\Delta y^{2}} \\
& =\sqrt{2^{2}+10^{2}} \\
& =\sqrt{4+100} \\
& =\sqrt{104} \\
& \approx 10.2
\end{aligned}
$$

(16)

$$
\begin{aligned}
& 12 \\
& 12^{2}+4^{2}=c^{2} \\
& 114+16=c^{2} \\
& \sqrt{160}==^{c^{2}} \\
& 12.6 \approx c
\end{aligned}
$$

(24) $\angle E B C=2 n+6$ $\angle F B E=3 n-24$
what is numerical value of $\frac{\operatorname{DBC} \text { ? }}{33}$


$$
\begin{gathered}
3 n-24=2 n+6 \\
-2 n-2 n \\
\hline n-24=6 \\
+24+24 \\
\hline n=30
\end{gathered}
$$

(4) $C$ is between $X$ and $Y$ with $Y<=3$ and $X Y=12$; what is $X C$ ?

(25) If $\angle A$ and $\angle B$ ore vertical
angles with $\angle A=5 n-3$ and $\angle B=3 n+13$, when is $\angle A$ ?
$\angle A=\angle B$
$5 n-3=3 n+13$
$\frac{-3 n-3 n}{2 n-3}=13$
$\frac{+3+3}{\frac{2 n}{2}=\frac{16}{2}}$
$n=8$
$\therefore \angle A=5 n-3$
$=5.8-3$
$-40.3$
$=37$

