$E \times 1 C$
(1)

$$
\begin{aligned}
& |x-2|>4 \\
& y=x-2
\end{aligned}
$$

QA

$$
\begin{aligned}
& 2-x=4 \\
& x=-2
\end{aligned}
$$



QB

$$
\begin{aligned}
& x-2=4 . \\
& x=6 \\
& x<-2 \text { or } x>6
\end{aligned}
$$

(2) $|2 x+3|<7$

Solutin bebura r belowars

$$
\begin{aligned}
& -2 x-3=7 \\
& -2 x=105 \\
& x=-5 \\
& 2 x+3=7 \\
& x=2 \\
& \cdots-5<x<2
\end{aligned}
$$

(3)

$$
\begin{gathered}
\text { (3) }|3 x-4|>7 x \\
\text { (a): }-3 x+4=7 x \\
x=40 \\
x<2 / 5
\end{gathered}
$$


(4) $3|x+1| \geqslant 1-x$

@1

$$
\begin{aligned}
3 x+3 & =1-x \\
4 x & =-2 \\
x & =-1 / 2 \\
\therefore \quad x & \leqslant-2 \text { or } x \geqslant-\frac{1}{2}
\end{aligned}
$$

(5) $\left|4-x^{2}\right| \leq 3$

A+D@

$$
\begin{aligned}
& x^{2}-4=3 \\
& x^{2}=7 \\
& x= \pm \sqrt{7}
\end{aligned}
$$



$$
\begin{aligned}
y & =-\left(4-x^{2}\right) \\
& \left.=x^{2}-4\right)
\end{aligned}
$$

Brce $4-x^{2}=3$

$$
\begin{array}{ccc}
x^{2}=1 \\
x=1 . & \therefore 0-\sqrt{7} \leq x \leq-1 & \text { or } \sqrt{x} \leq x a y \\
& \text { untexss } & 1 \leq x \leq \sqrt{7}
\end{array}
$$

(6) intersect@ $(x+1)+(x-2)=5$

$$
\begin{gathered}
2 x-1=5 \\
x=3
\end{gathered}
$$

ale $-(x+1)-(x-2)=5$

$$
-2 x+1=5
$$

$$
x=-2
$$



$$
-z \leqslant x \leqslant 3
$$

(7) $\left|\frac{2 x}{x-2}\right|<1$

$$
\begin{aligned}
& \text { A@ } \frac{2 x}{x-2}=1 \\
& 2 x=x-2 \\
& x=-2 \\
& B @-\frac{2 x}{x-2}=1 \\
& -2 x=x-2 \\
& -3 x=-2 \\
& x=\frac{2}{3}
\end{aligned}
$$



Solutin $\rightarrow$ betwan ADB $\therefore \quad-2<x<\frac{2}{3}$.

$$
\begin{aligned}
& \text { (8) }\left|x^{2}-2 x\right|<x \\
& \text { wherabe } x^{2}-2 x=x \\
& x^{2}-3 x=0 \\
& x(x-3)=0 \\
& x=0, x=3 \\
& -\left(x^{2}-2 x\right)=x \\
& -x^{2}+2 x=x \\
& x^{2}-x=0 \\
& x(x-1)=0 \\
& x=1
\end{aligned}
$$

Soluckin betwren A2B ie $1<x<3$
(9) $\left|8-2 x-x^{2}\right|<8$
@AよD

$$
\begin{aligned}
& -\left(8-2 x-x^{2}\right)=8 \\
& -8+2 x+x^{2}=8
\end{aligned}
$$

$$
\begin{aligned}
& x \not x^{2}+2=0 \\
& A e_{0}=2
\end{aligned}
$$



$$
\begin{gathered}
x^{2}+2 x-16=0 \\
(x+1)^{2}-17=0 \\
(x+1)^{2}=17 \\
x+1= \pm \sqrt{17} \\
x=-1 \pm \sqrt{17} \\
\therefore A=-1-\sqrt{17} \quad D=-1+\sqrt{17}
\end{gathered}
$$

(Q) BrC

$$
\begin{aligned}
& 8-2 x-x^{2}=8 \\
& x(x+2)=0 \\
& x=-2 \quad x=0
\end{aligned}
$$

$$
B=-2 \quad C=0
$$

Solukn her betwer A2 3 and $<x D$

$$
-1-\sqrt{17}<x<-2 \text { 의 } 0<x<-1+\sqrt{17}
$$

(10) $2 x+|x|<6$

$$
\text { \& } \sqrt{2 x}-7 x=6
$$

as 2x+
(a) $3 x=6$


(11) $\left|\frac{x+1}{x^{2}+2 x+2}\right| \leq \frac{1}{2}$

Frougroph, maximm Value $/ 2$


(12) $f(x)= \begin{cases}\frac{1}{x} & x>0 \\ |x| & x \leq 0\end{cases}$
@A

$$
\begin{aligned}
& \frac{1}{x}=4 \\
& x=\frac{1}{4}
\end{aligned}
$$

QB

$$
\begin{aligned}
-x & =4 \\
x & =-4
\end{aligned}
$$

Now $f(x) \leq 4$ whan $x \geqslant \frac{1}{4}$ or $-4 \leq x \leq 0$

