$$
\begin{aligned}
& 44 . \\
& \text { 44. } 2|8 x-1|-7=-3 \\
& \frac{2 \cdot \frac{2 \cdot \mid 8 x-1}{2}}{2}=\frac{4 \cdot 2}{2} \\
& |8 x-1|=2 \\
& 2 \sqrt{4}=2=-2=4 \\
& 8 x-1=2 \text { or } 8 x-1=-2 \\
& \begin{aligned}
&+1+1 \\
& \frac{8 x}{8}=\frac{3}{8}
\end{aligned} \\
& \frac{+1+1}{\frac{8 x}{8}=-\frac{1}{8}} \\
& x=\frac{3}{8} \\
& x=-\frac{1}{8} \\
& \text { 42. } 5|x-10|-6=20 \\
& +6+6 \\
& \frac{5|x-10|}{5}=\frac{26}{5} \\
& |x-10|=\frac{26}{5} \\
& \begin{array}{ll}
x-10=\frac{26}{5} \text { or } & x-10=-\frac{26}{5} \\
+10+10 \\
x=\frac{76}{5} & \frac{x=\frac{24}{5}}{}
\end{array} \\
& \text { 48. }|5 x+4|=|3 x+25| \\
& \begin{array}{l}
5 x+4=3 x+25 \text { or } 5 x+4=-3 x-25 \\
\left.\begin{array}{l}
-3 x+3 x \\
2 x+4=25 \\
-4-4
\end{array} \quad \begin{array}{l}
+3 x+3 x \\
8 x+4=-25 \\
-4
\end{array}\right)
\end{array} \\
& \frac{2 x}{2}=\frac{21}{2} \\
& \begin{array}{lll}
x=\frac{21}{2} & 0-7+ \\
& 8-132 \\
149
\end{array} \quad \begin{array}{ll}
8 x=-\frac{29}{8}
\end{array}
\end{aligned}
$$

3.5 A bsoluti value Inequalities

Less than case

$$
\begin{aligned}
& |a x+b|<c \\
& -c<a x+b<c
\end{aligned}
$$

$$
\text { Ex: } \frac{6|x-5|}{6} \frac{\leq 12}{6}
$$

$$
|x-5| \leq 2
$$

$$
\begin{aligned}
& -2 \leq x-5 \leq 2 \\
& +5+5+5 \\
& 3 \leq x \leq 7
\end{aligned}
$$



Greater than case

$$
\begin{aligned}
& |a x+b|>C \\
& a x+b>c \text { or } a x+b<-c \\
& \text { Ex: }|3 x-4|>5 \\
& 3 x-4>5 \text { or } 3 x-4<-5 \\
& \frac{+4+4}{\frac{3 x>9}{3} \frac{1}{3}} \quad \frac{+4+4}{\frac{3 x}{3}<-\frac{1}{3}} \\
& x>3 \text { or } x<\frac{-1}{3}
\end{aligned}
$$



$$
\begin{aligned}
& E x:\left|2-\frac{x}{3}\right|<.01 \\
& -.01<2-\frac{x}{3}<.01 \\
& \frac{-2-2}{-3-2.01<-\frac{x}{3}-3}<-1.99 .-3 \\
& 6.03>x>5.97 \\
& \underset{5.97}{(\longrightarrow 6.03})
\end{aligned}
$$

HW

$$
\text { p. } 220
$$

70-104 even, odds Extracredit

