44. $2|8x-1|-7=-3$

$+7 \quad +7$

$2 \cdot \frac{2|8x-1|}{2} = \frac{4}{2} \cdot 2$

$|8x-1|=2$

$8x-1=2$ or $8x-1=-2$

$+1 \quad +1$ $\qquad$ $+1 \quad +1$

$\frac{8x}{8}=\frac{3}{8}$ $\qquad$ $\frac{8x}{8}=\frac{-1}{8}$

$x=\frac{3}{8}$ $\qquad$ $x=-\frac{1}{8}$

$2\sqrt{4}=2\cdot 2=4$

$\sqrt{8}$

42. $5|x-10|-6=20$

$+6 \quad +6$

$\frac{5|x-10|}{5}=\frac{26}{5}$

$|x-10|=\frac{26}{5}$

$\frac{1}{3}=.\overline{3}$

$x-10=\frac{26}{5}$ or $x-10=\frac{-26}{5}$

$+10 \quad +10$ $\qquad$ $+10 \quad +10$

$x=\frac{76}{5}$ $\qquad$ $x=\frac{24}{5}$

48. $|5x+4|=|3x+25|$

$5x+4=3x+25$ or $5x+4=-3x-25$

$-3x \quad -3x$ $\qquad$ $+3x \quad +3x$

$2x+4=25$ $\qquad$ $8x+4=-25$

$-4 \quad -4$ $\qquad$ $-4 \quad -4$

$\frac{2x}{2}=\frac{21}{2}$ $\qquad$ $\frac{8x}{8}=\frac{-29}{8}$

$x=\frac{21}{2}$ $\qquad$ $x=-\frac{29}{8}$

0-7 ✗

8-13 ✓

14 ✗

3.5 Absolute Value Inequalities

Less than case

$$|ax+b| < c$$

$$-c < ax+b < c$$

Ex: $6|x-5| \leq 12$

$\div 6 \quad \div 6$

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

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

$+5 \quad +5 \quad +5$

$$3 \leq x \leq 7$$

Greater than case

$|ax+b| > c$

$ax+b > c$ or $ax+b < -c$

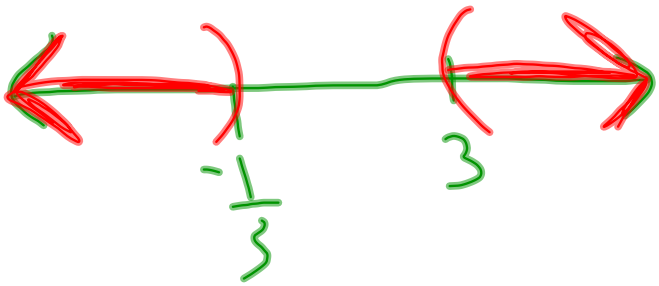
Ex: $|3x-4| > 5$

$3x-4 > 5$ or $3x-4 < -5$

$+4 \quad +4$ $\quad$ $+4 \quad +4$

$\frac{3x}{3} > \frac{9}{3}$ $\quad$ $\frac{3x}{3} < -\frac{1}{3}$

$x > 3$ or $x < -\frac{1}{3}$



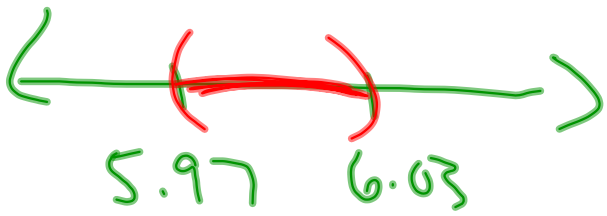
Ex: $\left|2-\frac{x}{3}\right|<.01$

$-.01<2-\frac{x}{3}<.01$

$-2 \quad -2 \quad -2$

$-3 \cdot -2.01 < -\frac{x}{3} \cdot -3 < -1.99 \cdot -3$

$6.03 > x > 5.97$



Hw:

p. 220

70-104 even,

odds Extra credit