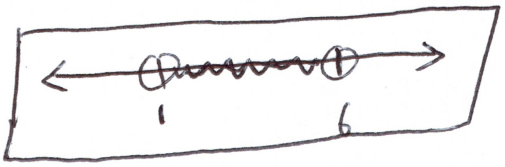
From the book: Abs. Value and Compound Ineq.

Page 85: 1, 5, 9, 17, 19

Page 91: 21, 25, 29, 31.

Page 85, (1): $1 < x < 6$



(5) solve

$-2 < x+2 < 8$

$-2 < x+2$ and $x+2 < 8$

$-4 < x$ and $x < 6 \Rightarrow \boxed{-4 < x < 6}$

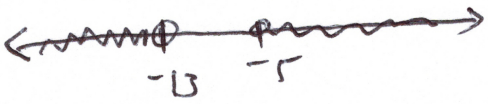
(9) $7 > -x+7 > -7$

$7 > -x+7$ and $-x+7 > -7$

$x > 0$ and $14 > x \Rightarrow \boxed{0 < x < 14}$

(17) $x+9 \leq -4$ or $x+9 \geq 4$

$\boxed{x \leq -13 \text{ or } x \geq -5}$



(19) $x-7 \leq -2$ or $3x-7 \geq 2$

$x \leq 5$ or $3x \geq 9 \Rightarrow \boxed{x \leq 5 \text{ or } x \geq 3} \Rightarrow$ Any real number

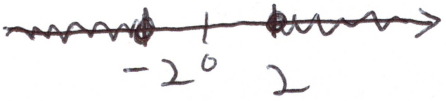
Page 91: (21)

$|x| = 3 \Rightarrow$ $\boxed{x = -3 \text{ or } x = 3}$

(25) $|x| \geq 2$

$x \geq 2$ or $-x \geq 2$

$\boxed{x \geq 2 \text{ or } x \leq -2}$

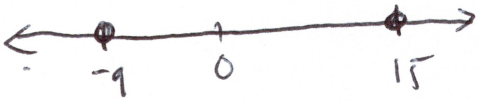


(29) $|x - 3| = 12$

$x - 3 = 12$ or $-(x-3) = 12$

$x = 15$ or $-x + 3 = 12$

$\boxed{x = 15 \text{ or } x = -9}$



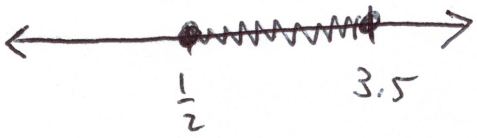
(31) $|2x - 3| \leq 4$

$2x - 3 \leq 4$ AND $-(2x-3) \leq 4$

$2x \leq 7$ AND $-2x + 3 \leq 4$

$\boxed{x \leq 3.5 \text{ AND } -2x \leq +1, \; x \geq \frac{1}{2}}$

$\boxed{\frac{1}{2} \leq x \leq 3.5}$



$\boxed{x \in \left[\frac{1}{2}, 3.5\right]}$