p. 339-340: 20, 24, 26-31(W), 33-41(O), 49, 50

20) $x > -18$

24) $-3 > x$

26) $x \leq -5$

27) $x \geq -3$

28) $-9 < x$

29) C

30) B

31) A

33) $x < 12$

35) $6 \leq x$

37) $x \leq -1$

39) $x > 1\frac{1}{2}$

41) $x > -14/3$

49) $9 + 9 + x + x > 26$

$2x + 18 > 26$; $x > 4$m

50) $4x \leq 25$; $x \leq 6\frac{1}{4}$m

6.4 Solving Compound Inequalities Involving "And"

Apr. 25, 2007

Intersection

what is in common

$\{2,4,6,8\}$ "and" $\{1,2,3,4,5\}$
$= \{2,4\}$

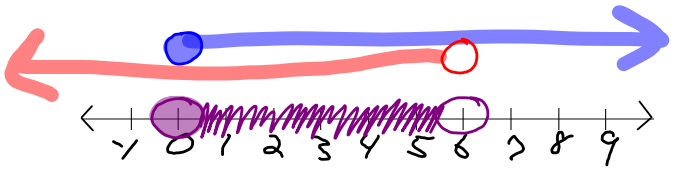
Write a Compound Inequality that represents $\mathbb{R}$ greater than or equal to zero "and" less than 6.

$x \geq 0$ and $x < 6$

Get the Variables touching "and"

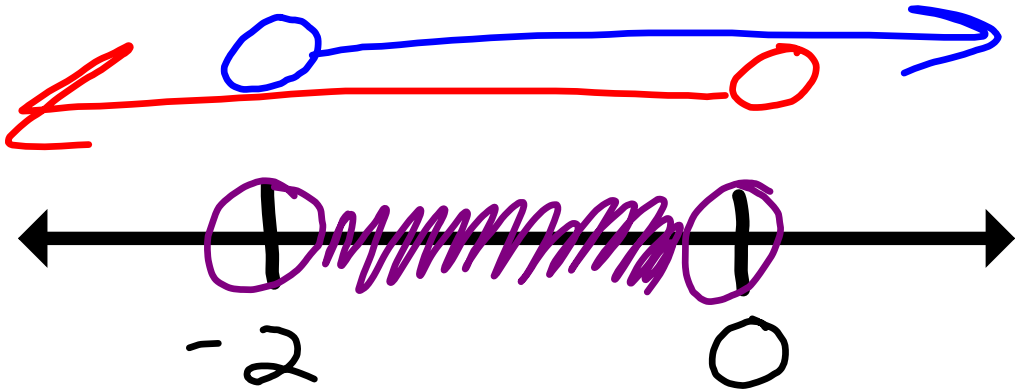
$0 \leq x$ and $x < 6$

$0 \leq x < 6$



The Purple is the Answer!
the red & blue is the work to get to the Answer!

ex2) Graph $-2 < y < 0$



What does this Mean?

$\mathbb{R}$ greator than -2 and less than 0.

Solving:

* Get `x' by Itself

$$-2 < x+2 \leq 4$$

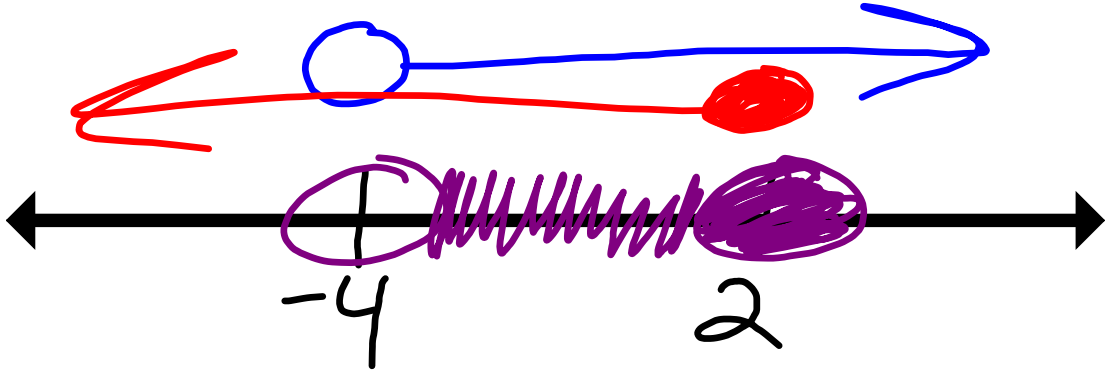
$$-2 \quad -2 \quad -2$$

$-2 < x+2$ and $x+2 \leq 4$

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

$-4 < x$ and $x \leq 2$

$$-4 < x \leq 2$$



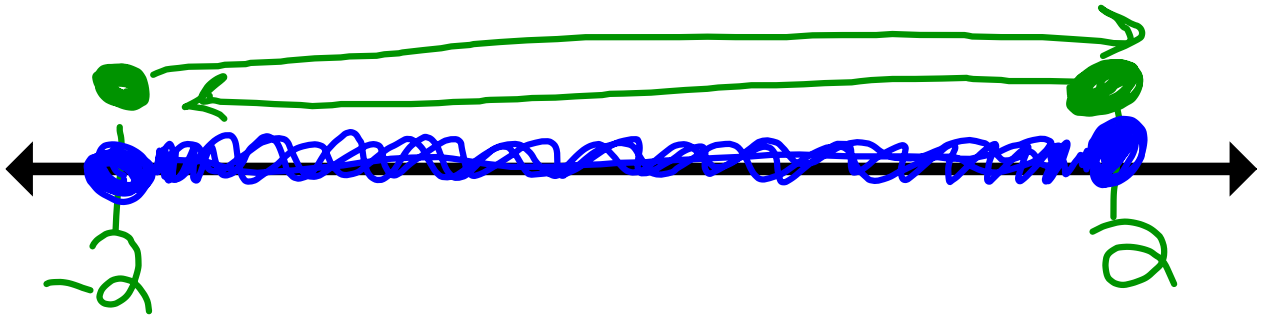
ex4) $-3 \leq 2x+1 \geq 5$

$-1 \quad -1 \quad -1$

$-4 \leq 2x \geq 4$

$\frac{}{2} \quad \frac{}{2} \quad \frac{}{2}$

$-2 \leq x \geq 2$



ex5) $-2 < -2 - x < 1$

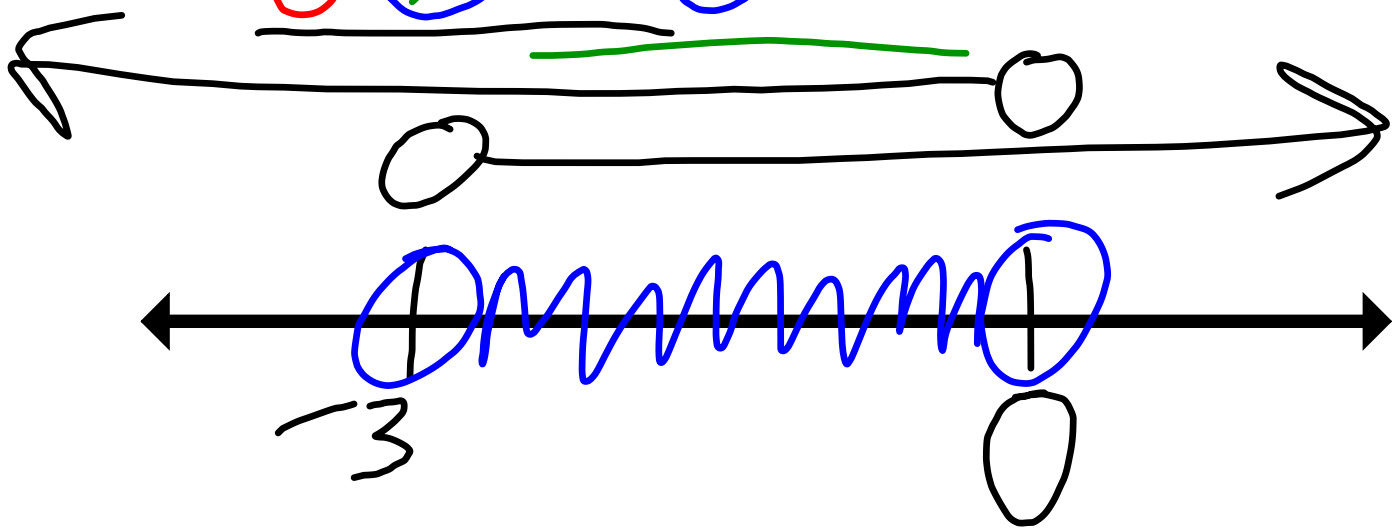
$+2 \quad +2 \quad +2$

$0 < -x < 3$

$\div -1 \quad \div -1$

$0 > x > -3$

We Need to switch & do that 1st since we ÷ by -1



O.T.L.

① Pg 345-346:

14-17 (a);

29-37 (o);

40-46 (e);

28