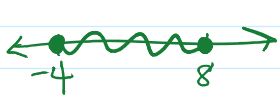
1.2 day 1

Wednesday, August 28, 2013 8:17 AM

Rewrite using interval notation and graph:

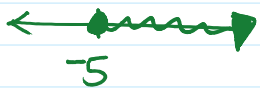
(1) $-4 \le x \le 8$

$[-4, 8]$ 

(2) $3 < x < 11$

$(3, 11)$ 

(3) $x \ge -5$

$[-5, \infty)$ 

(4) $-\infty < x$

$(-\infty, \infty)$ 

Solve for x, describe your answer in interval notation, and graph your solution.

compound inequality

5. $-14 < 3x - 2(x+8) \le 72$

$-14 < 3x - 2x - 16 \le 72$

$-14 < x - 16 \le 72$

$2 < x \le 88$

$(2, 88]$ 

$-14 < 3x - 2(x+8)$ ∩ $3x - 2(x+8) \le 72$

6. $4+3(8x-5)>-2(5x+18)-7$

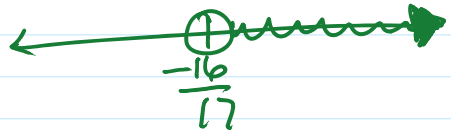
$4+24x-15>-10x-36-7$

$24x-11>-10x-43$

$32>-34x$

$-\frac{32}{34}<x$

$x>-\frac{16}{17}$



7. $\left[\frac{5x}{2}-\frac{7x+4}{8}\geq\frac{2(8x-5)}{4}\right]\cdot 8$

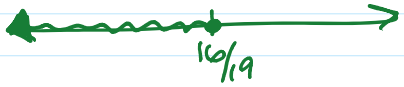
$4\cdot 5x-(7x+4)\geq 2\cdot 2(8x-5)$

$20x-7x-4\geq 32x-20$

$13x-4\geq 32x-20$

$16\geq 19x$

$x\leq\frac{16}{19}$



$(-\infty,\frac{16}{19}]$

8. $36-8\left[\frac{1}{2}(5x-3)\right]-7>22+3\left[\frac{2}{3}x-(7-3x)\right]$

$$36-8\left[\frac{1}{4}(5x-3)\right]-7>22+3\left[\frac{2}{3}x-(7-3x)\right]$$

$36-10x+6-7 > 22+2x-3(7-3x)$

$35-10x > 22+2x-21+9x$

$35-10x > 22+11x-21$

$35-10x > 1+11x$

$34 > 21x$

$\frac{34}{21} > x$

$(-\infty, \frac{34}{21})$