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HW: Word Problems Inequalities

Nov. 19

1.) $2e + 7 < 15 + 4e$

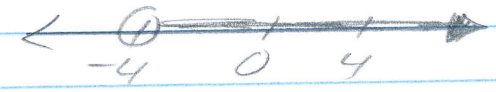
$-4e \qquad -4e$

$-2e + 7 < 15$

$-7 \qquad -7$

$\frac{-2e}{-2} < \frac{8}{-2}$ flip   *divided by a negative so flip the symbol

$e > -4$



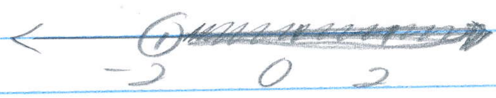
2.) $-3(3x+1) < 15$

$-9x - 3 < 15$

$+3 \qquad +3$

$\frac{-9x}{-9} < \frac{18}{-9}$ flip

$x > -2$



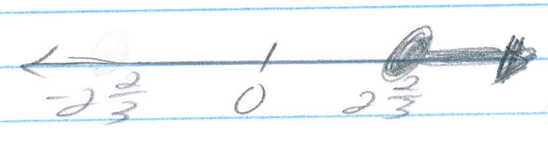
3.) LCD $6\left[\frac{1}{2}x + \frac{5}{3} \geq \frac{3}{1}\right]$

$3x + 10 \geq 18$

$-10 \qquad -10$

$\frac{3x}{3} \geq \frac{8}{3}$

$x \geq 2\frac{2}{3}$



4.) $10[4.5 - 0.5x > 1x]$

$45 - 5x > 10x$

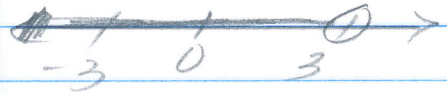
$+5x \quad +5x$

$\frac{45}{15} > \frac{15x}{15}$

$3 > x$

rewrite

$x < 3$



5.) $15x - 4 < 9 + 2x$

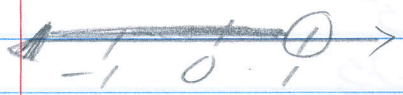
$-2x \quad -2x$

$13x - 4 < 9$

$+4 \quad +4$

$\frac{13x}{13} < \frac{13}{13}$

$x < 1$



The largest integer is 0.

6.) $3x \geq 2 - 2(x - 5)$

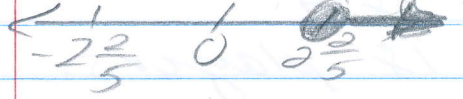
$3x \geq 2 - 2x + 10$

$3x \geq 12 - 2x$

$+2x \quad +2x$

$\frac{5x}{5} \geq \frac{12}{5}$

$x \geq 2\frac{2}{5}$



The smallest integer is 1.

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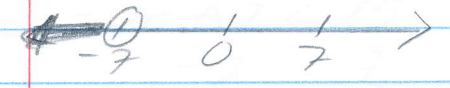
7) $\frac{-5e}{-5} \geq \frac{35}{-5}$

$e \leq -7$



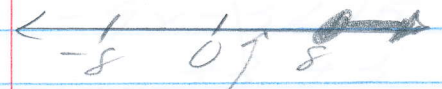
(C) -9

8.) $2e - 6 \geq 10$

$+6 \quad +6$

$\frac{2e}{2} \geq \frac{16}{2}$

$e \geq 8$



(B) 4 not a solution

9.) Let x = # of rides

$1.25x + 3.75 \geq 44$

$-3.75 \quad -3.75$

$\frac{1.25x}{1.25} \geq \frac{40.25}{1.25}$

$x \geq 32.2$

Kevin can ride 32 or more rides.

10.) Let x = # of players

$450 + 28.75x \leq 979$

$-450 \qquad -450$

$\frac{28.75x}{28.75} \leq \frac{529}{28.75}$

$x \leq 18.4$

They can take 18 players.