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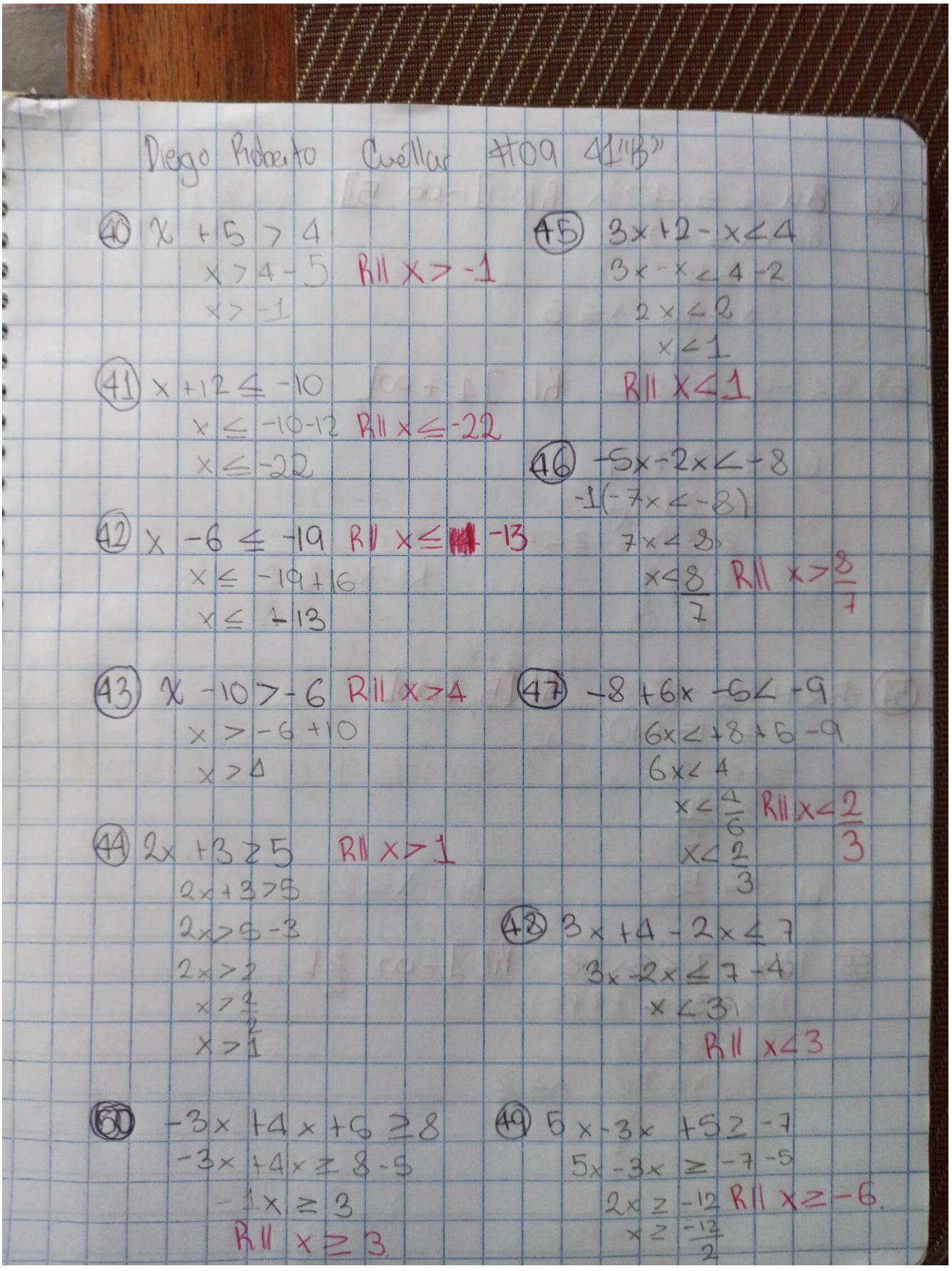

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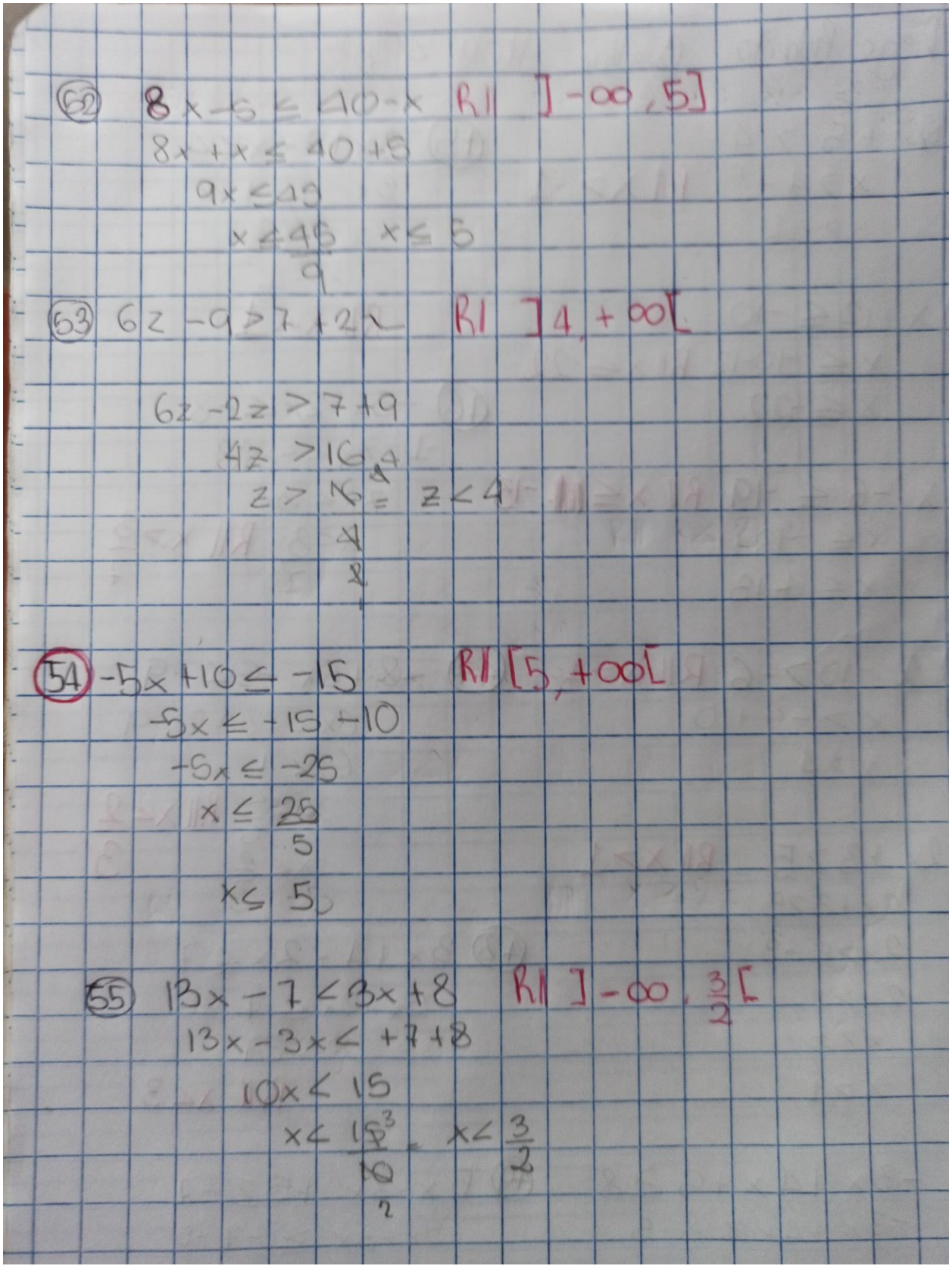

(52) $8x - 5 \leq 10 - x$ R// $]-\infty, 5]$

$8x + x \leq 10 + 5$

$9x \leq 15$

$x \leq \frac{15}{9}$ $\quad x \leq 5$

(53) $6z - 9 > 7 + 2z$ R// $]4, +\infty[$

$6z - 2z > 7 + 9$

$4z > 16$

$z > \frac{16}{4} = z < 4$

4

2

(54) $-5x + 10 \leq -15$ R// $[5, +\infty[$

$-5x \leq -15 - 10$

$-5x \leq -25$

$x \leq \frac{25}{5}$

$x \leq 5$

(55) $13x - 7 < 3x + 8$ R// $]-\infty, \frac{3}{2}[$

$13x - 3x < +7 + 8$

$10x < 15$

$x < \frac{15^3}{10}$ $\quad x < \frac{3}{2}$

2

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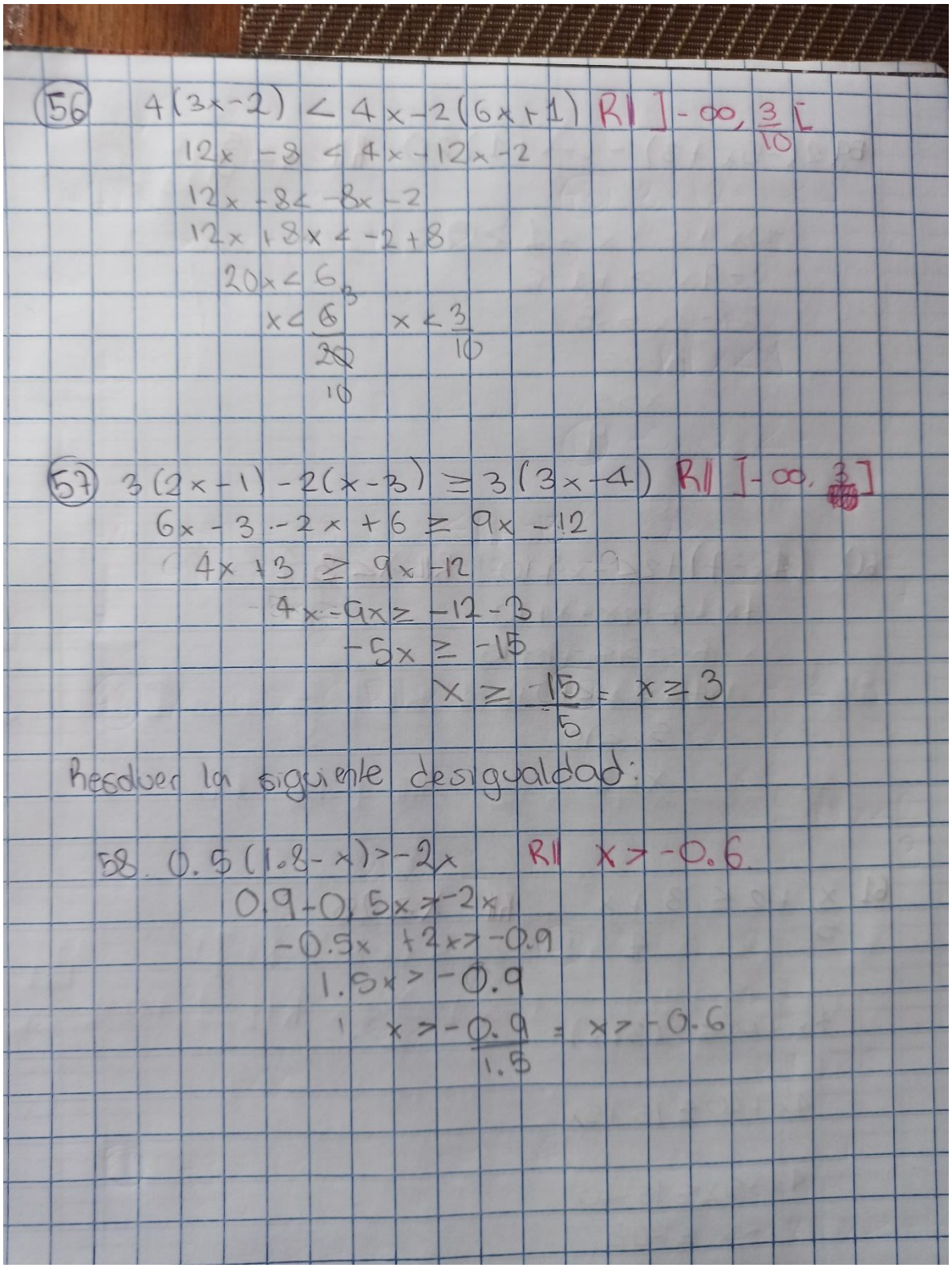

(56) $4(3x-2) < 4x-2(6x+1)$ R// $]-\infty, \frac{3}{10}[$

$12x-8 < 4x-12x-2$

$12x+8 < -8x-2$

$12x+8x < -2+8$

$20x < 6$

$x < \frac{6}{20}^{3}$ $\quad x < \frac{3}{10}$

10

(57) $3(2x-1)-2(x-3) \geq 3(3x-4)$ R// $]-\infty, 3]$

$6x-3-2x+6 \geq 9x-12$

$4x+3 \geq 9x-12$

$4x-9x \geq -12-3$

$-5x \geq -15$

$x \geq \frac{15}{5} = x \geq 3$

Resolver la siguiente desigualdad:

58. $0.5(1.8-x) > -2x$ R// $x > -0.6$

$0.9-0.5x > -2x$

$-0.5x+2x > -0.9$

$1.5x > -0.9$

$x > \frac{-0.9}{1.5} = x > -0.6$

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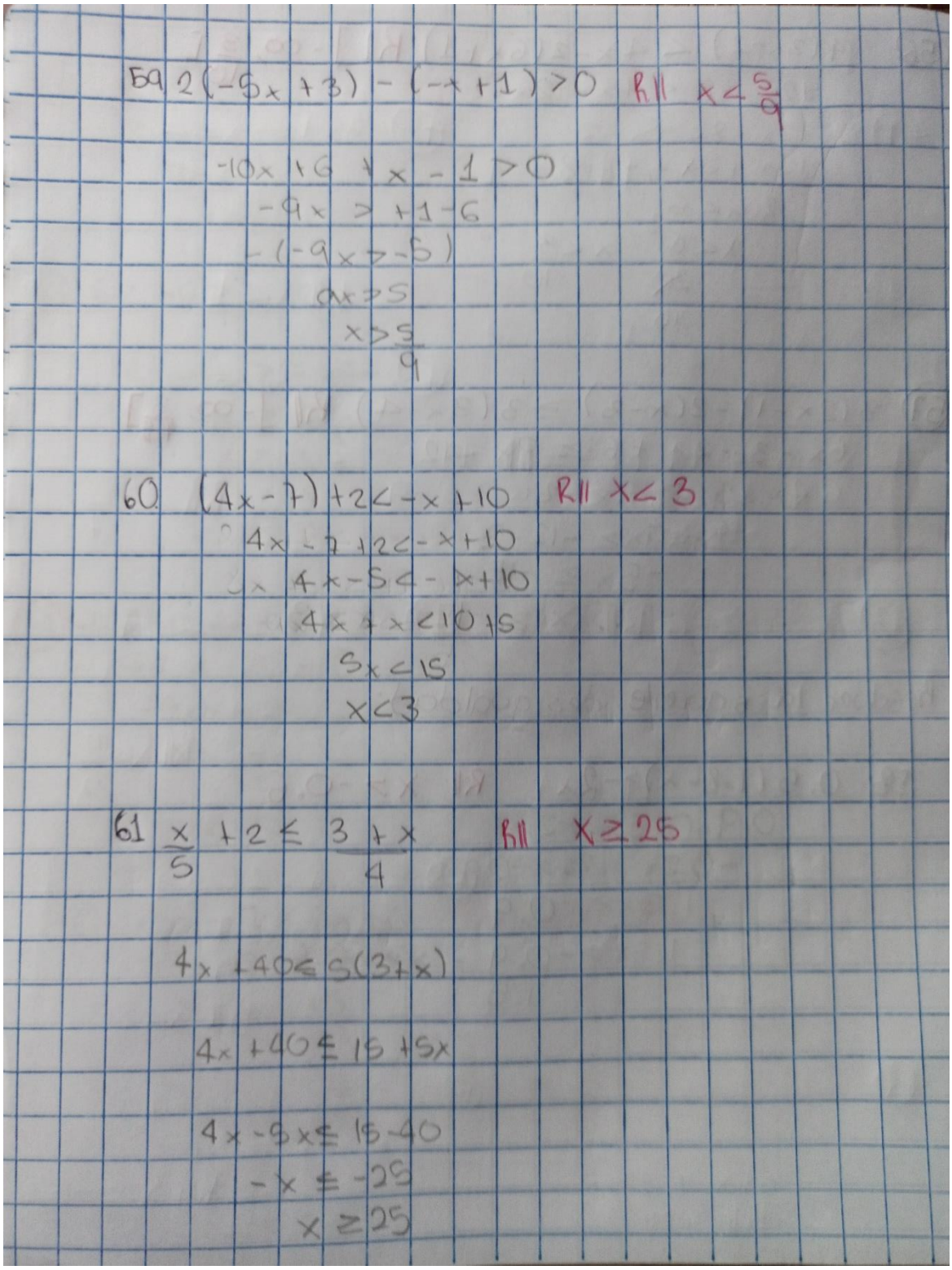


59 $2(-5x+3)-(-x+1)>0$ R// $x<\frac{5}{9}$

$-10x+6+x-1>0$

$-9x>+1-6$

$-(-9x>-5)$

$9x>5$

$x>\frac{5}{9}$

60 $(4x-7)+2<-x+10$ R// $x<3$

$4x-7+2<-x+10$

$4x-5<-x+10$

$4x+x<10+5$

$5x<15$

$x<3$

61 $\frac{x}{5}+2\leq\frac{3+x}{4}$ R// $x\geq 25$

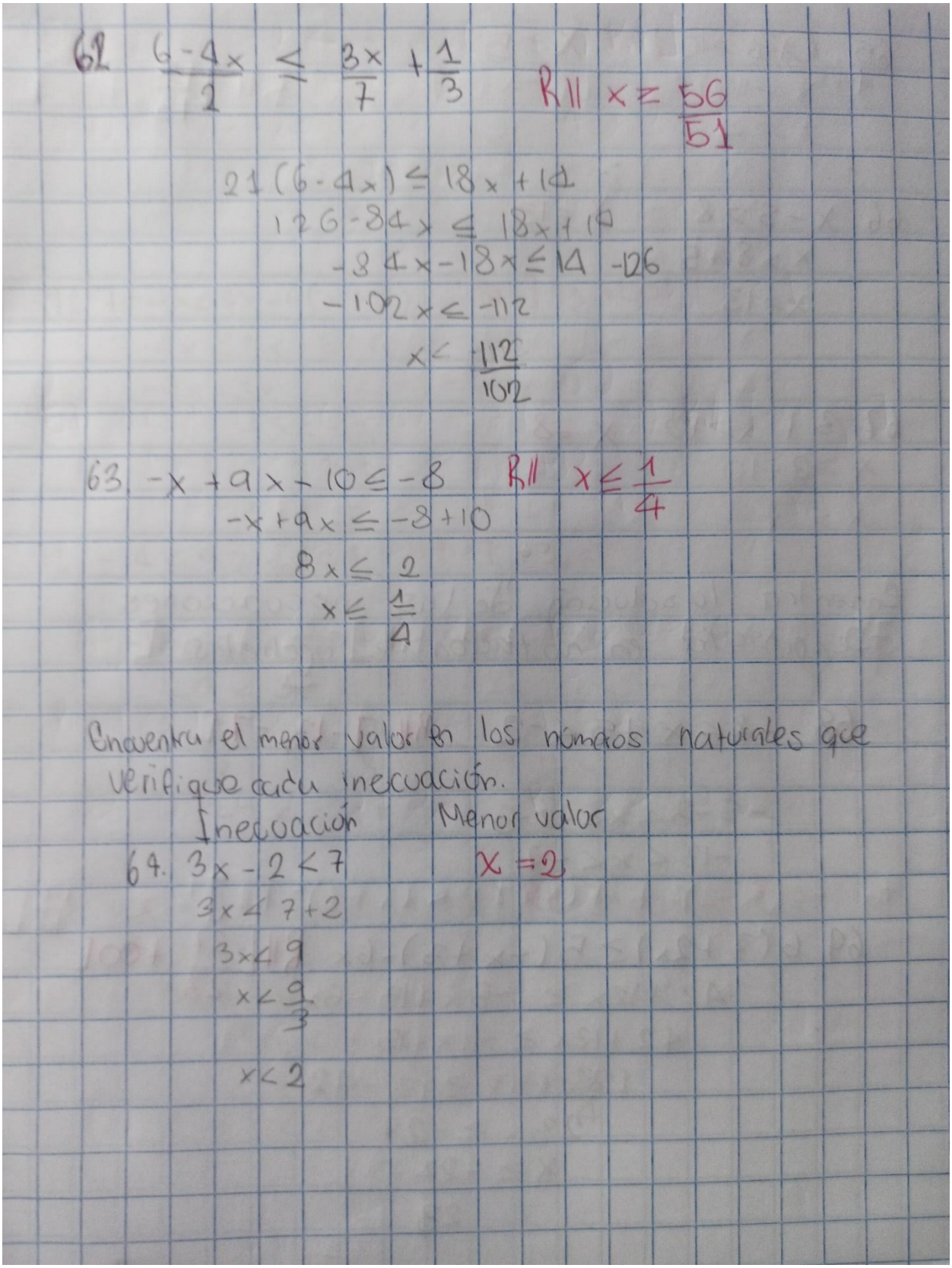
$4x+40\leq 5(3+x)$

$4x+40\leq 15+5x$

$4x-5x\leq 15-40$

$-x\leq -25$

$x\geq 25$



62. $\frac{6-4x}{2} \leq \frac{3x}{7} + \frac{1}{3}$ R// $x \geq \frac{56}{51}$

$21(6-4x) \leq 18x + 14$

$126 - 84x \leq 18x + 14$

$-84x - 18x \leq 14 - 126$

$-102x \leq -112$

$x \leq \frac{-112}{102}$

63. $-x + 9x - 10 \leq -8$ R// $x \leq \frac{1}{4}$

$-x + 9x \leq -8 + 10$

$8x \leq 2$

$x \leq \frac{1}{4}$

Encuentra el menor valor en los números naturales que verifique cada inecuación.

	Inecuación	Menor valor
64.	$3x - 2 < 7$	$x = 2$

$3x < 7 + 2$

$3x < 9$

$x < \frac{9}{3}$

$x < 2$

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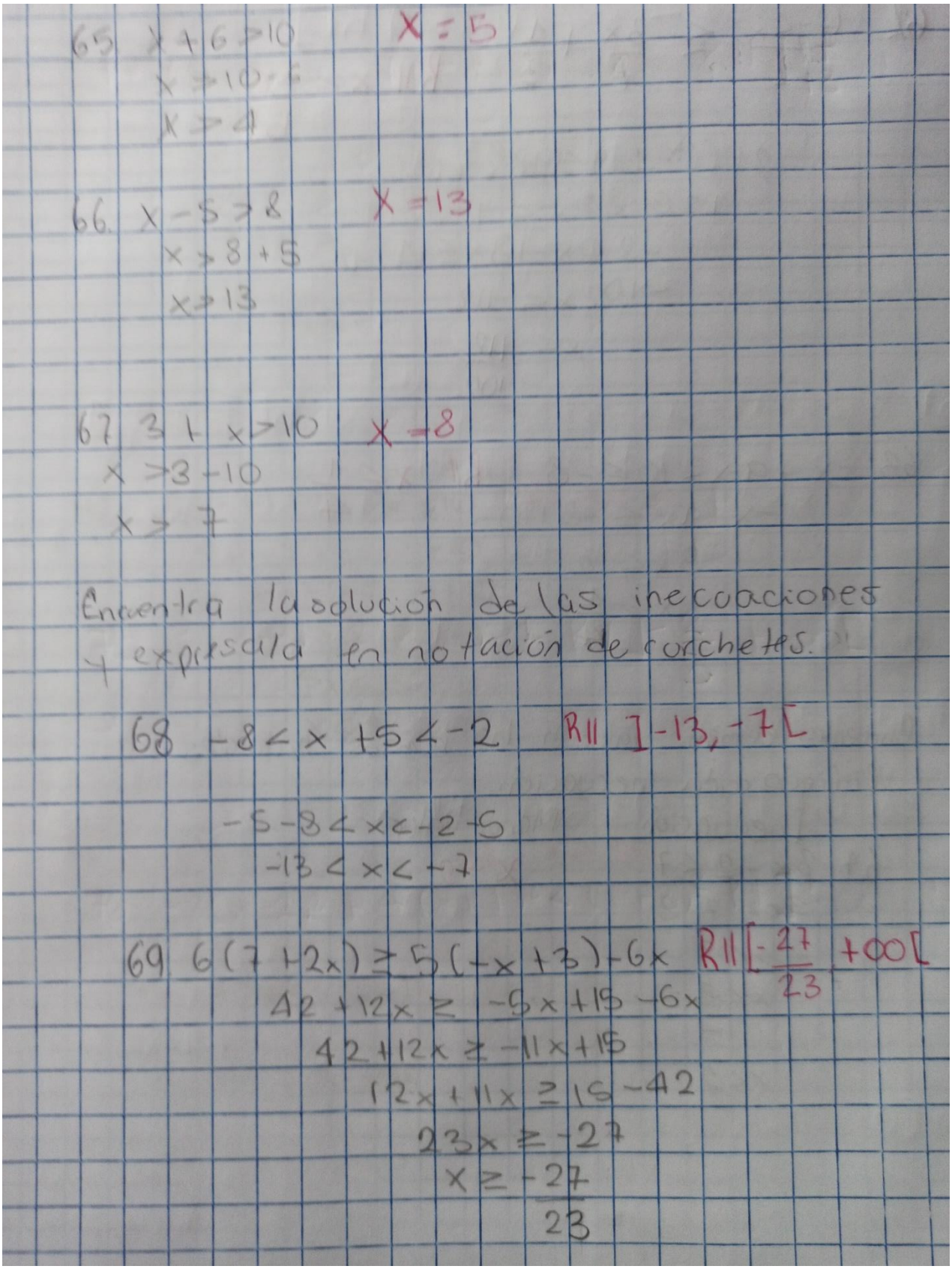

65 $x + 6 \geq 10$ $x = 5$

$x \geq 10 - 6$

$x \geq 4$

66 $x - 5 \geq 8$ $x = 13$

$x \geq 8 + 5$

$x \geq 13$

67 $3 + x \geq 10$ $x = 8$

$x \geq 3 - 10$

$x \geq 7$

Encuentra la solución de las inecuaciones y expresala en notación de corchetes.

68 $-8 < x + 5 < -2$ R// $]-13, -7[$

$-5 - 8 < x < -2 - 5$

$-13 < x < -7$

69 $6(7 + 2x) \geq 5(-x + 3) - 6x$ R// $\left[-\frac{27}{23}, +\infty\right[$

$42 + 12x \geq -5x + 15 - 6x$

$42 + 12x \geq -11x + 15$

$12x + 11x \geq 15 - 42$

$23x \geq -27$

$x \geq -\frac{27}{23}$

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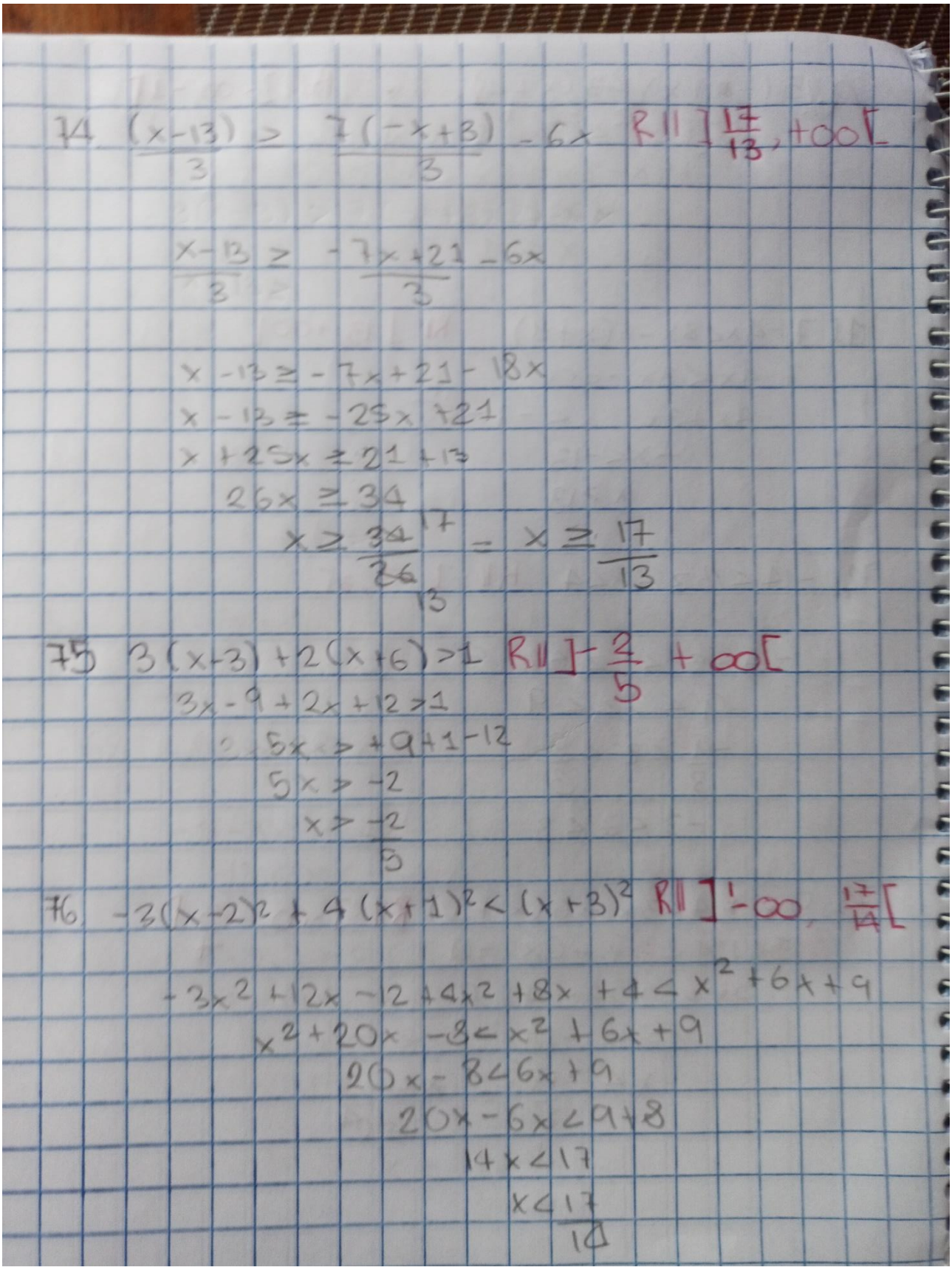

74. $\frac{(x-13)}{3} \geq \frac{7(-x+3)}{3} - 6x$ R// $]\frac{17}{13}, +\infty[$

$\frac{x-13}{3} \geq \frac{-7x+21}{3} - 6x$

$x - 13 \geq -7x + 21 - 18x$

$x - 13 \geq -25x + 21$

$x + 25x \geq 21 + 13$

$26x \geq 34$

$x \geq \frac{34}{26} \Rightarrow x \geq \frac{17}{13}$

75. $3(x-3) + 2(x+6) > 1$ R// $]-\frac{2}{5} + \infty[$

$3x - 9 + 2x + 12 > 1$

$5x > +9 + 1 - 12$

$5x > -2$

$x > \frac{-2}{5}$

76. $-3(x-2)^2 + 4(x+1)^2 < (x+3)^2$ R// $]-\infty, \frac{17}{14}[$

$-3x^2 + 12x - 2 + 4x^2 + 8x + 4 < x^2 + 6x + 9$

$x^2 + 20x - 8 < x^2 + 6x + 9$

$20x - 8 < 6x + 9$

$20x - 6x < 9 + 8$

$14x < 17$

$x < \frac{17}{14}$

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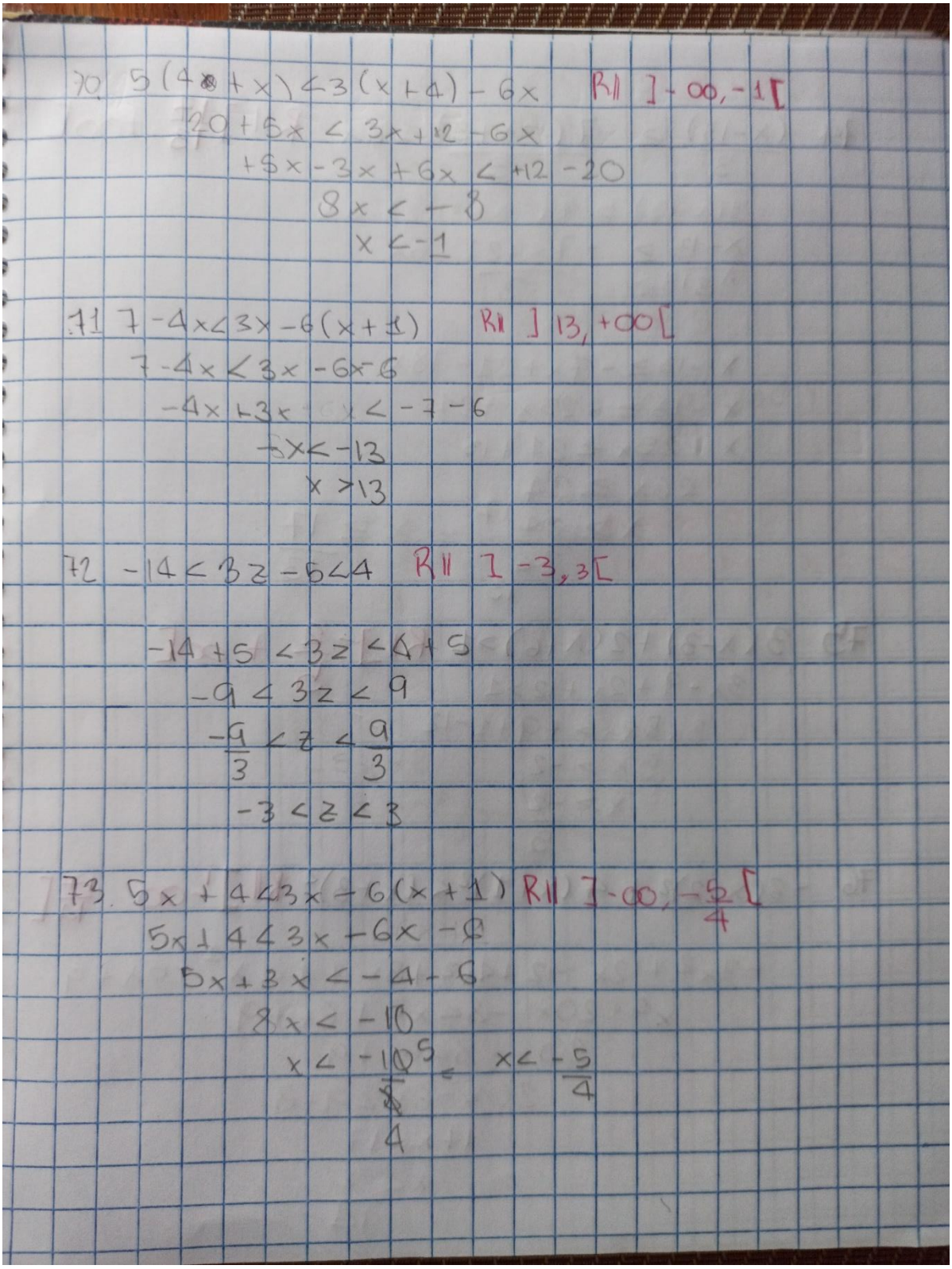

70. $5(4+x) < 3(x+4) - 6x$ R// $]-\infty, -1[$

$20 + 5x < 3x + 12 - 6x$

$+5x - 3x + 6x < +12 - 20$

$8x < -8$

$x < -1$

71. $7 - 4x < 3x - 6(x+1)$ R// $]13, +\infty[$

$7 - 4x < 3x - 6x - 6$

$-4x + 3x + x < -7 - 6$

$-x < -13$

$x > 13$

72. $-14 < 3z - 5 < 4$ R// $]-3, 3[$

$-14 + 5 < 3z < 4 + 5$

$-9 < 3z < 9$

$\frac{-9}{3} < z < \frac{9}{3}$

$-3 < z < 3$

73. $5x + 4 < 3x - 6(x+1)$ R// $]-\infty, -\frac{5}{4}[$

$5x + 4 < 3x - 6x - 6$

$5x + 3x < -4 - 6$

$8x < -10$

$x < -\frac{10}{8}^{5}$ $x < -\frac{5}{4}$

4

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