

Serie I:

a) $h + 2x = 4$

$2x + 4h = 9$

① $h + 2x = 4 - 2x$

② $4(2x + 4) + 2x = 9$

$h = 4 - 2x$

$-8x + 16 + 2x = 9$

$-8x + 16 + 2x = 9 - 16$

$-8x + 2x = -7$

$-6x = -7$

$x = \frac{7}{6}$

③ $h = 4 - 2x$

$h = -2x + 4$

$h = -2\left(\frac{7}{6}\right) + 4$

$h = \frac{-14}{6} + 4$

$h = \frac{-7}{3} + 4 \quad h = \frac{5}{3} = x \quad \frac{7}{6}$

Determinado

b)

$x + 2y = 4$

$3x + y = 4$

① $x + 2y = 4 - 2y$

② $3(-2y + 4) + y = 4$

$x = 4 - 2y$

$-6y + 12 + y = 4$

$-6y + 12 + y = 4 - 12$

$-6y + y = -8$

$-5y = -8$

$y = \frac{8}{5}$

determinado

③

$x = -2\left(\frac{8}{5}\right) + 4$

$x = \frac{-16}{5} + 4$

$x = \frac{4}{5}$

④ $-2x + 3y = 12$

$x + 4y = 7$

② $-2(-4y + 7) + 3y = 12$ ① $x + 4y = 7 - 4y$

$8y - 14 + 3y = 12$

$x = 7 - 4y$

$11y = 12 - 2$

③

$x = -4\left(\frac{14}{11}\right) + 7$

$x = \frac{-56}{11} + 7 \quad x = \frac{-45}{11}$

Determinado

$11y = 14$

$y = \frac{14}{11}$

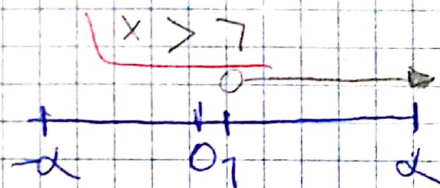
Serie II

④ $3x + 7 < 4$

$(-1) 3x + 7 < 4 - 7$

$(-3) 3x < 4 - 7$

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



⑤ $\frac{t}{2} - 7 \leq \frac{2t}{3} + 2$

$\frac{t}{2} - 7 \leq \frac{2t}{3} + 2$

$\frac{t}{2} \cdot 6 - 7(6) \leq \frac{2t}{3} \cdot 6 + 2(6)$

$3t - 6 \leq 4t + 12$

⑥ $2(k-7) - 4 > 3k + 5$

$2k - 2 - 4 > 3k + 5 \quad (-3k)$

$-3k + 2k - 2 - 4 > 5$

$k - 2 - 4 > 5$

$k > 2 + 4 + 5$

$(-1) - k > 11 \quad (-1)$

$k < -11$

$3t \leq 18 + 4t$

$-t \leq 18$

$(-1) \cdot t \geq 18$

$t \geq 18$

Serie III

④ $2(y+7) - 3(y-2) < y + 6$

$2y + 14 - 3(y-2) < y + 6$

$2y + 14 - 3y + 6 < y + 6$

$2y - 3y < -2 - 6 + 6 + y$

$-y + 2y - 3y < -2$

$-2y < -2$

$(-1) 2y < -2 \quad (-1)$

$y > \frac{-2}{2}$

$y > -1$

⑤ $\frac{3z+7}{6} - \frac{2-4z}{4} \geq \frac{-5z+1}{14}$

$6(3z+7) - 14(2-4z) \geq 3(-5z+1) + 7(7z)$

$18z + 42 - 28 + 56z \geq -15z - 12 + 49z$

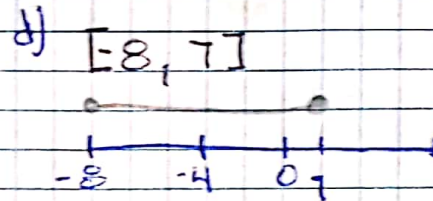
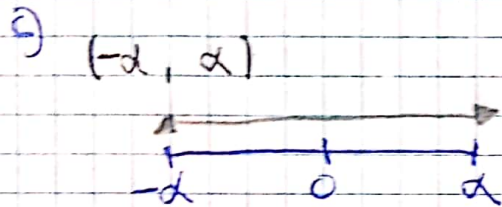
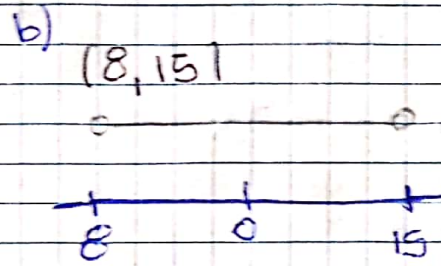
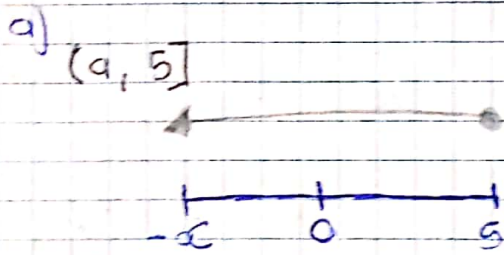
$18z + 56z + 15z - 49z \geq -12 - 6 + 28$

$40z \geq 10 - 28$

$40z \geq -18$

$(-1) 40z \geq 18 \quad (-1)$

$z \leq \frac{18}{40}$



IV a) $\frac{1}{16}x^3 - \frac{5}{8}x^2y + \frac{5}{3}xy^2 - y^3$

$$-\frac{3}{2}y + \frac{1}{11}x$$

$$\frac{\frac{1}{16}x^3 + \frac{3}{8}x^3y}{16}$$

$$-\frac{1}{4}x^2y + \frac{5}{3}xy^2$$

$$-\frac{1}{4}x^2y - \frac{3}{2}xy^2$$

$$\frac{1}{6}xy^2 - y^3$$

b) $\frac{22xy - 15x^2 - 8y^2}{3x + 2y}$

$$3x + 2y$$

$$\frac{15y^2 \quad 22xy - 8y^2}{3x + 2y}$$

$$3x + 2y$$

$$15x^2 + 22xy - 8y^2$$

$$15x^2 - 10xy$$

$$12xy - 8y^2$$

$$3x + 4y$$