

ASIGNATURA

MATEMÁTICA

EJERCICIO N° 1

- a) $x_2 = \frac{3}{4}$
- b) $m_1 = -1$
- c) $x_1 = \frac{3}{2}$
- d) Ninguna, no tiene solución en los reales.

EJERCICIO N° 2

- a) $x = -3$
- b) $m = \frac{26}{3}$
- c) $t = \frac{15}{2}$
- d) $x = \frac{17}{2}$
- e) $p = \frac{21}{11}$
- f) $y = 5$
- g) $x = -\frac{1}{3}$
- h) $m = \frac{13}{6}$
- i) $x = \frac{13}{3}$
- j) $x = 5$
- k) $x = -\frac{1}{2}$
- l) $s = -4$

EJERCICIO N° 3

- a) $n = \frac{IR}{E-ir}$
- b) $P = \frac{2ux(1+m)}{gt^2}$
- c) $x = \frac{a(1-b)}{b(2-a)}$
- d) $L = \frac{Wu^2}{g(T+2W)}$
- e) $K = \sqrt{\frac{T^2 gh - 4\pi^2 h^2}{4\pi^2}}$
- f) $c = \frac{(2ax+b)^2 - b}{-4a}$
- g) $S = \frac{R}{T^2+1}$

$$h) R = \sqrt{\frac{l^2 - W^2 L^2 E^2}{E^2}}$$

$$i) p = \frac{rs - f(r-s)}{f(r-s)}$$

EJERCICIO N° 4

$$a) x_1 = 2; x_2 = 3$$

$$b) m_1 = -4; m_2 = 3$$

$$c) t_1 = -\frac{3}{2}; t_2 = \frac{1}{2}$$

$$d) r_1 = -\frac{1}{3}; r_2 = \frac{3}{2}$$

$$e) x_1 = \frac{5 - \sqrt{13}}{2}; x_2 = \frac{5 + \sqrt{13}}{2}$$

$$f) s_1 = \frac{-3 - \sqrt{5}}{2}; s_2 = \frac{-3 + \sqrt{5}}{2}$$

EJERCICIO N° 5

$$a) x_1 = -2; x_2 = 6$$

$$b) p_1 = -5; p_2 = 3$$

$$c) m_1 = -4; m_2 = 1$$

$$d) x_1 = -1; x_2 = \frac{1}{6}$$

$$e) s_1 = 0; s_2 = \frac{1}{3}$$

$$f) p_1 = -4; p_2 = \frac{1}{2}$$

EJERCICIO N° 6

$$a) x_1 = \frac{7}{5}; x_2 = 2$$

$$b) m_1 = -4; m_2 = -\frac{7}{3}$$

$$c) x = 4$$

$$d) s = 21$$

$$e) p \notin \mathbb{R}, \text{ primer miembro mayor o igual a } 0.$$

$$f) r_1 = -1; r_2 = \sqrt[3]{3}$$

$$g) x = 0$$

$$h) t_1 = 0; t_2 = 3; t_3 = 4$$

$$i) x_1 = -2; x_2 = -\frac{4}{3}$$

$$j) s_1 = -1; s_2 = \frac{9}{5}$$

Ejercicio 7:

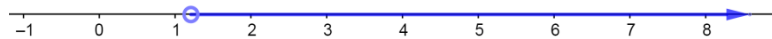
$$a) x_1 = 1; x_2 = \sqrt{2}; x_3 = 2; x_4 = 4$$

$$b) x = 4$$

$$c) x_1 = -1; x_2 = 0; x_3 = \frac{1}{2}; x_4 = 1$$

Ejercicio 8:

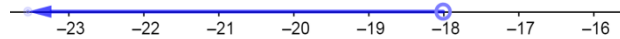
a) $S = \left(\frac{6}{5}, \infty\right)$



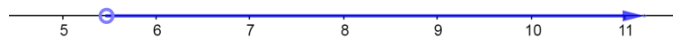
b) $S = \left[\frac{9}{5}, \infty\right)$



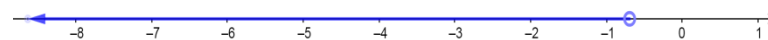
c) $S = (-\infty, -18)$



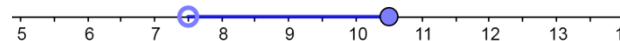
d) $S = \left(\frac{11}{2}, \infty\right)$



e) $S = \left(-\infty, -\frac{16}{25}\right]$



f) $S = \left(\frac{15}{2}, \frac{21}{2}\right]$



g) $S = \left[\frac{11}{12}, \frac{13}{6}\right]$



Ejercicio 9:

a) $S = (-\infty, -3) \cup (4, \infty)$



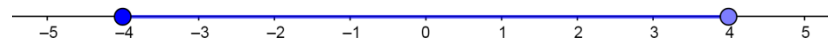
b) $S = \{ \}$



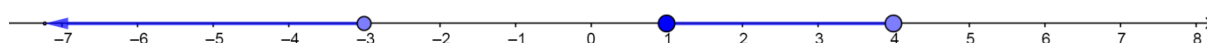
c) $S = \mathbb{R}$



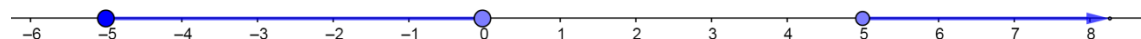
d) $S = [-4, 4]$



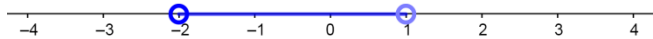
e) $S = (-\infty, -3] \cup [1, 4]$



f) $S = [-5, 0] \cup [5, \infty)$



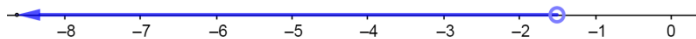
g) $S = (-2, 1)$



h) $S = (-\infty, -3) \cup \left(-\frac{4}{7}, +\infty\right)$



i) $S = \left(-\infty, -\frac{3}{2}\right)$



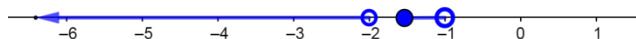
j) $S = [-2, -1) \cup (0, 1]$



k) $S = [-2, 0) \cup (1, 2]$

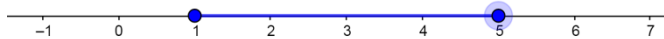


l) $S = (-\infty, -2) \cup \left[-\frac{3}{2}, -1\right)$

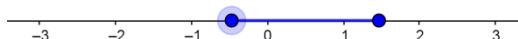


Ejercicio 10:

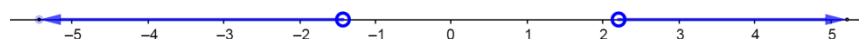
a) $S = [1, 5]$



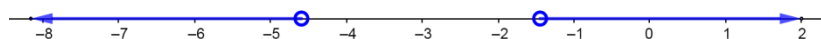
b) $S = \left[-\frac{1}{2}, \frac{3}{2}\right]$



c) $S = \left(-\infty, -\frac{7}{5}\right) \cup \left(\frac{11}{5}, +\infty\right)$



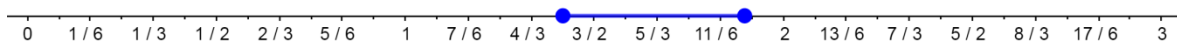
d) $S = \left(-\infty, -\frac{23}{5}\right) \cup \left(-\frac{7}{5}, +\infty\right)$



e) $S = (-4, 8)$



f) $S = \left[\frac{17}{12}, \frac{23}{12}\right]$

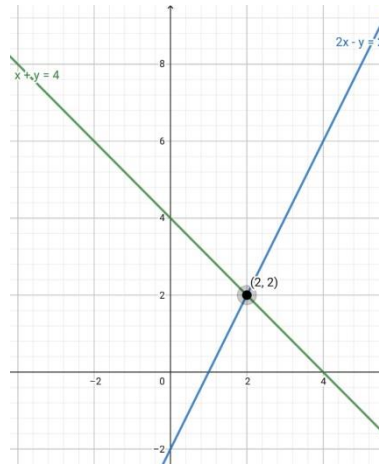


Ejercicio 11:

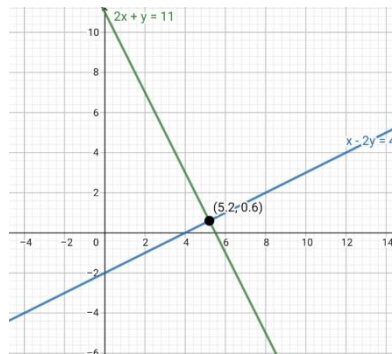
Las rectas son secantes.

Ejercicio 12:

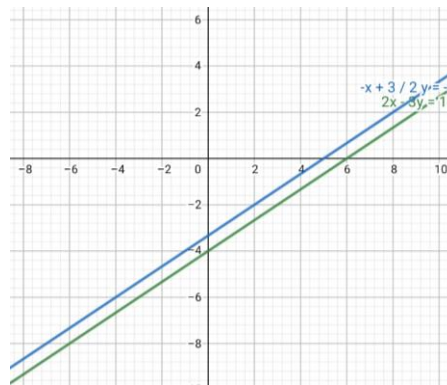
a) $S = \{(2; 2)\}$



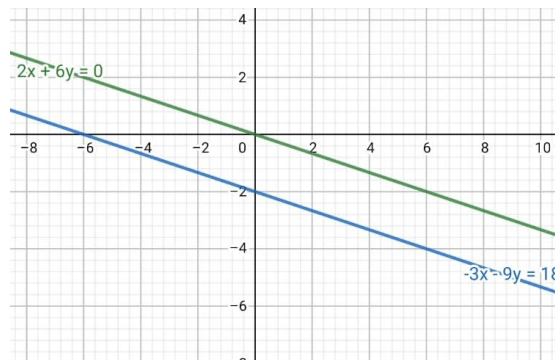
b) $S = \left\{ \left(\frac{26}{5}, \frac{3}{5} \right) \right\}$



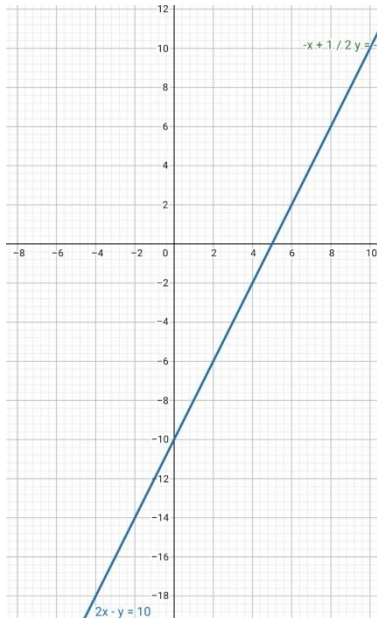
c) $S = \{ \}$



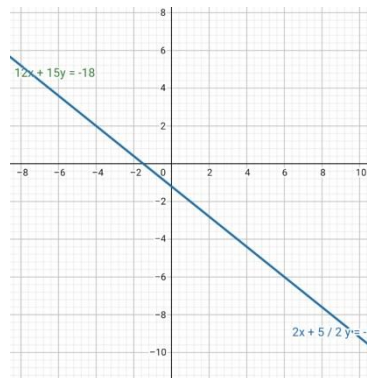
d) $S = \{ \}$



e) $S = \{(x, 2x - 10)\}$



$$f) S = \left\{ \left(x, -\frac{4}{5}x - \frac{6}{5} \right) \right\}$$



Ejercicio 13:

- Puede armar 15 mesas de 3 patas y 12 mesas de 4 patas, para que no le falten ni sobren patas.
- Los dos números cuya suma es 34 y cuya diferencia es 10, son 12 y 22.
- Martín invierte \$14000 en la primera cuenta y \$6000 en la segunda cuenta.
- Las dimensiones del campo son: el largo 725 m y el ancho 775 m.
- En la bicicletería hay 20 bicicletas y 3 triciclos.
- Las medidas de los lados iguales del triángulo son 9 cm y el lado desigual mide 15 cm.
- El área del rectángulo es de 15cm².
- Los lados del rectángulo son: 6,5 m y 4m.
- El área del rombo es de 3,2 cm²

Ejercicio 14:

- $k = 1$
- $a = -\frac{2}{7}$
 $b = \frac{45}{7}$

Ejercicio 15:

a) $A = (2,0)$
 $B = \left(\frac{2}{3}, -\frac{4}{3}\right)$

Ejercicio 16:

a) $A = (-1, -2)$
 $B = (2,1)$

Ejercicio 17: Es una recta exterior a la circunferencia.

EJERCICIOS ADICIONALES PROPUESTOS

EJERCICIO N° 1

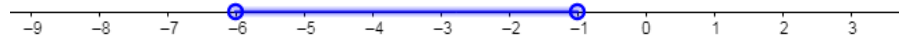
- a) $x = 30$
- b) $m = \frac{1}{17}$
- c) $t = -2$
- d) $x = \frac{11}{2}$
- e) $x_1 = -\frac{3}{2}; x_2 = \frac{7}{2}$
- f) $y_1 = -2; y_2 = \frac{1}{3}$
- g) $p_1 = \frac{-3-\sqrt{2}}{2}; p_2 = \frac{-3+\sqrt{2}}{2}$
- h) $m_1 = \frac{1}{4}; m_2 = \frac{1}{2}$
- i) $x = -4$ Corregir ecuación $\frac{x+5}{x-2} = \frac{5}{x+2} = \frac{28}{x^2-4}$ a $\frac{x+5}{x-2} - \frac{5}{x+2} = \frac{28}{x^2-4}$
- j) $x = 3$
- k) $x_1 = -2\sqrt{2}; x_2 = -\sqrt{5}; x_3 = \sqrt{5}; x_4 = 2\sqrt{2}$
- l) $v_1 = 2\sqrt{2}; v_2 = 3\sqrt{3}$

EJERCICIO N° 2

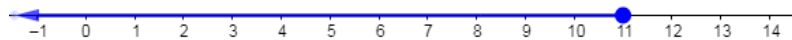
- a) $x = \frac{2d-b}{a-2c}$
- b) $a = \frac{b(b+1)}{2}$
- c) $r = \sqrt{\frac{GmM}{F}}$
- d) $i = 100 \left(\sqrt{\frac{A}{P}} - 1 \right)$
- e) $t_{1,2} = \frac{v_0 \mp \sqrt{v_0^2 + 2gh}}{g}$

EJERCICIO N° 3

a) $S = (-6, -1)$



b) $S = (-\infty, 11]$



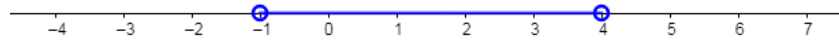
c) $S = \left(-\infty, \frac{11}{9}\right)$



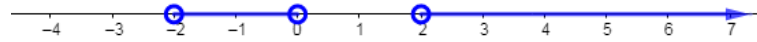
d) $S = (-\infty, 48)$



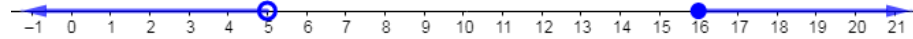
e) $S = (-1, 4)$



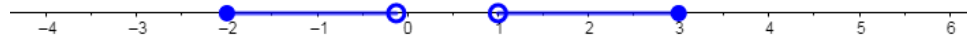
f) $S = (-2, 0) \cup (2, \infty)$



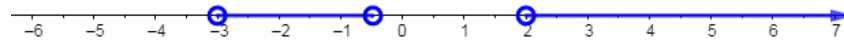
g) $S = (-\infty, 5) \cup [16, \infty)$



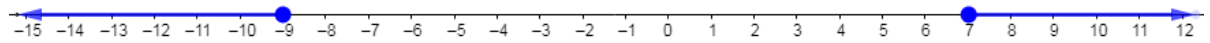
h) $S = [-2, 0) \cup (1, 3]$



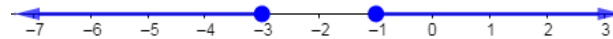
i) $S = (-3, -\frac{1}{2}) \cup (2, \infty)$



j) $S = (-\infty, -9] \cup [7, \infty)$



k) $S = (-\infty, -3] \cup [-1, \infty)$



l) $S = [\frac{13}{10}, \frac{17}{10}]$

