1. Exercicis d'equacions de primer grau

a) $\dfrac{3-9x}{21}-\dfrac{7-8x}{35}=-\dfrac{4x}{28}$

b) $\dfrac{7x+4}{30}+\dfrac{4-12x}{24}=-\dfrac{9+7x}{6}$

c) $7x-\dfrac{8x-11}{2}=\dfrac{3+4x}{2}+x$

d) $4\left(8x-10\right)+\dfrac{11+11x}{11}=2\left(1+6x\right)$

e) $-\dfrac{7x-1}{21}+\dfrac{7x+6}{28}=-\dfrac{7x-10}{7}$

f) $\dfrac{10x+8}{8}+\dfrac{-10+11x}{4}=-\dfrac{11+6x}{2}+\dfrac{8+2x}{4}$

2. Exercicis de sistemes d'equacions (1)

a) $\left.\begin{array}{rcl}-12x-9y&=&11\\-8x+7y&=&7\end{array}\right\}$

b) $\left.\begin{array}{rcl}-12x-9y&=&10\\-x+3y&=&10\end{array}\right\}$

c) $\left.\begin{array}{rcl}11x-9y&=&-5\\-6x+10y&=&4\end{array}\right\}$

d) $\left.\begin{array}{rcl}9x+5y&=&6\\-11x+6y&=&-2\end{array}\right\}$

e) $\left.\begin{array}{rcl}-8x+6y&=&-6\\6x+11y&=&7\end{array}\right\}$

f) $\left.\begin{array}{rcl}-8x+6y&=&-6\\4x-3y&=&6\end{array}\right\}$

3. Exercicis de sistemes d'equacions (2)

a) $\left.\begin{array}{rcl}-4x-9&=&y-2x-10\\2y+5x-8&=&9x-5y-12\end{array}\right\}$

b) $\left.\begin{array}{rcl}\dfrac{2x+y}{3}&=&4-\dfrac{x-y}{2}\\\dfrac{42x-100}{3}&=&2y+\dfrac{44}{3}\end{array}\right\}$

c) $\left.\begin{array}{rcl}7x+7y-12-2y+6x-5&=&-9x+7y-7\\y-4x-1&=&\dfrac{2y+11x+4}{6}\end{array}\right\}$

d) $\left.\begin{array}{rcl}2-11x+y+\dfrac{10-4x-7y}{2}&=&\dfrac{8y-8x+4}{4}\\-5+4x+3y&=&-9+8x+y\end{array}\right\}$

4. Exercicis d'equacions de segon grau

a) $x^2-9x+14=0$

b) $x^2+3x-10=0$

c) $8x^2-10x-63=0$

d) $4x^2-4x+1=0$

e) $x^2-15x+58=0$

f) $5x^2-48x-77=0$

• Solucions

1. Equacions de primer grau

a) $x = -1$ **b)** $x = -2$ **c)** No té solució **d)** $x = \dfrac{41}{21}$ **e)** $x = \dfrac{14}{11}$ **f)** $x = -\dfrac{4}{13}$

2. Sistemes de primer grau (1)

a) $x = -\dfrac{35}{39}\,,\ y = -\dfrac{1}{39}$ **b)** $x = -\dfrac{8}{3}\,,\ y = \dfrac{22}{9}$ **c)** $x = -\dfrac{1}{4}\,,\ y = \dfrac{1}{4}$ **d)** $x = \dfrac{46}{109}\,,\ y = \dfrac{48}{109}$

e) $x = \dfrac{27}{31}\,,\ y = \dfrac{5}{31}$ **f)** No té solució

3. Sistemes de primer grau (2)

a) $x = \dfrac{11}{18}\,,\ y = -\dfrac{2}{9}$ **b)** Té infinites solucions. **c)** $x = \dfrac{10}{3}\,,\ y = \dfrac{95}{3}$ **d)** $x = \dfrac{3}{4}\,,\ y = -\dfrac{1}{2}$

4. Equacions de segon grau

a) $x_1 = 7\,,\ x_2 = 2$ **b)** $x_1 = -5\,,\ x_2 = 2$ **c)** $x_1 = -\dfrac{9}{4}\,,\ x_2 = \dfrac{7}{2}$ **d)** $x_1 = x_2 = \dfrac{1}{2}$

e) No té solució **f)** $x_1 = 11\,,\ x_2 = -\dfrac{7}{5}$