



Nome: \_\_\_\_\_ nº \_\_\_\_\_ Turma 8A

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3º Bimestre

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Ensino Fundamental I  
e II

Sistemas de Equações

Correção Exercícios de Fixação

1) a)  $\begin{cases} x+y=17 \\ x-y=3 \end{cases} \rightarrow \boxed{x=17-y}$   
 $x=17-7$   
 $\boxed{x=10}$   
 $17-y-y=3$   
 $-y-y=3-17$   
 $-2y=-14$   
 $y=\frac{-14}{-2} \rightarrow \boxed{y=7}$

b)  $\begin{cases} 2x+3y=2 \\ x-y=8 \end{cases} \rightarrow \boxed{x=8+y}$   
 $2 \cdot (8+y) + 3y = 2$   
 $x = \frac{8-14}{5}$   
 $16+2y+3y=2$   
 $x = \frac{40-14}{5}$   
 $2y+3y=2-16$   
 $\boxed{x=\frac{26}{5}}$   
 $5y=-14$   
 $\boxed{y=-\frac{14}{5}}$

c)  $\begin{cases} x+2y=3 \\ 9x-y=2 \end{cases} \rightarrow \boxed{x=3-2y}$   
 $9 \cdot (3-2y) - y = 2$   
 $x = \frac{3-2 \cdot 25}{19}$   
 $27-18y-y=2$   
 $x = \frac{3-50}{19}$   
 $-18y-y=2-27$   
 $x = \frac{57-50}{19}$   
 $-19y=-25$   
 $\boxed{y=\frac{25}{19}}$   
 $\boxed{x=\frac{7}{19}}$

d)  $\begin{cases} -2x+y=1 \\ y=-x-5 \end{cases} \rightarrow \boxed{y=-(-2)-5}$   
 $y=2-5$   
 $-2x-x-5=1$   
 $\boxed{y=-3}$   
 $-2x-x=1+5$   
 $-3x=6$   
 $x=\frac{6}{-3}$   
 $\boxed{x=-2}$

e)  $\begin{cases} x+y=5/2 \\ x-y/2=1 \end{cases} \rightarrow \boxed{x=1+\frac{y}{2}}$   
 $1+\frac{y}{2}+y=\frac{5}{2}$   
 $x=1+\frac{1}{2}$   
 $\frac{y}{2}+y=\frac{5}{2}-1$   
 $x=\frac{2+1}{2}$   
 $\frac{y}{2}+y=\frac{5-2}{2}$   
 $\boxed{x=\frac{3}{2}}$   
 $y+2y=3$   
 $3y=3$   
 $y=\frac{3}{3}$   
 $\boxed{y=1}$

f)  $\begin{cases} 2(x+y)=5(x-y) \\ x/2=y-2 \end{cases}$   
 $2x+2y=5x-5y$   
 $2x-5x+2y+5y=0$   
 $-3x+7y=0$   
 $\frac{x}{2}=y-2 \rightarrow \boxed{x=2(y-2)}$   
 $\boxed{x=2y-4}$   
 $-3(2y-4)+7y=0$   
 $x=2 \cdot (-12)-4$   
 $-6y+12+7y=0$   
 $x=-24-4$   
 $-6y+7y=-12$   
 $\boxed{x=-28}$   
 $\boxed{y=-12}$

$$2) a) \begin{cases} x+y=25 \rightarrow y=25-x \\ x-y=-5 \end{cases}$$

$$\begin{array}{r} 2x \quad / = 20 \\ x = \frac{20}{2} \\ \boxed{x=10} \end{array}$$

$$y = 25 - 10$$

$$\boxed{y=15}$$

$$b) \begin{cases} x+4y=0 \\ x-y=5 \cdot (-1) \rightarrow x=5+y \end{cases}$$

$$\begin{array}{r} x+4y=0 \\ -x+y=-5 \\ \hline 5y=-5 \\ y = \frac{-5}{5} \\ \boxed{y=-1} \end{array}$$

$$x = 5 - 1$$

$$\boxed{x=4}$$

$$c) \begin{cases} x-2y=1 \cdot (-3) \rightarrow \cancel{2y-6} \\ 3x+7y=29 \end{cases}$$

$$\begin{array}{r} -3x+6y=-3 \\ 3x+7y=29 \\ \hline 13y=26 \\ y = \frac{26}{13} \\ \boxed{y=2} \end{array}$$

$$x = 1 + 2y$$

$$x = 1 + 2 \cdot 2$$

$$x = 1 + 4$$

$$\boxed{x=5}$$

$$d) \begin{cases} \frac{2x}{3} - \frac{y}{3} = 4 \\ \frac{x}{3} + \frac{y}{2} = 6 \cdot (-2) \end{cases}$$

$$\begin{array}{r} \frac{2x}{3} - \frac{y}{3} = 4 \rightarrow \frac{2x}{3} = 4 + \frac{y}{3} \\ \frac{2x}{3} = \frac{12+y}{3} \\ 2x = 3 \cdot \frac{(12+y)}{3} \\ 2x = 12+y \\ x = \frac{12+y}{2} \end{array}$$

$$\begin{array}{r} \frac{2x}{3} - \frac{y}{3} = 4 \rightarrow \frac{2x}{3} = 4 + \frac{y}{3} \\ \frac{2x}{3} = \frac{12+y}{3} \\ 2x = 12+y \\ x = \frac{12+y}{2} \end{array}$$

$$\begin{array}{r} -\frac{y}{3} - \frac{2y}{2} \rightarrow \frac{-2y-6y}{6} \\ -8y = -8 \\ y = \frac{-8}{-8} \\ \boxed{y=1} \end{array}$$

$$x = \frac{12+1}{2}$$

$$x = \frac{13}{2}$$

$$\boxed{x=6.5}$$

$$2x = 12+y$$

$$x = \frac{12+y}{2}$$

$$\frac{12+y}{2} = 6 \cdot (-2)$$

$$\frac{12+y}{2} = -12$$

$$12+y = -12 \cdot 2$$

$$12+y = -24$$

$$y = -24 - 12$$

$$y = -36$$

$$\boxed{y=-36}$$

$$x = \frac{12-36}{2}$$

$$x = \frac{-24}{2}$$

$$x = -12$$

$$\boxed{x=-12}$$

$$e) \begin{cases} 4x+1=3y \\ 2x-3=2y \end{cases}$$

$$\begin{cases} 4x-3y=-1 \\ 2x-2y=+3 \cdot (-2) \end{cases}$$

$$\begin{cases} 4x-3y=-1 \\ -4x+4y=-6 \end{cases}$$

$$\boxed{y = -7}$$

$$4x = -1 + 3y$$

$$x = \frac{-1+3y}{4}$$

$$x = \frac{-1+3 \cdot (-7)}{4}$$

$$x = \frac{-1-21}{4}$$

$$\boxed{x = -\frac{22}{4}}$$

$$f) \begin{cases} \frac{a}{2} - \frac{b}{3} = 1 \\ a+4 = 3(b+2) \end{cases}$$

$$\begin{cases} \frac{a}{2} - \frac{b}{3} = 1 \\ a+4 = 3b+6 \end{cases}$$

$$\begin{cases} \frac{a}{2} - \frac{b}{3} = 1 \\ a-3b = 6-4 \end{cases}$$

$$\begin{cases} \frac{a}{2} - \frac{b}{3} = 1 \\ a-3b = 2 \end{cases}$$

$$\boxed{a = 2+3b}$$

$$\frac{2+3b}{2} - \frac{b}{3} = 1 \quad \left\{ \begin{array}{l} a = 2+3 \cdot 0 \\ \boxed{a = 2} \end{array} \right.$$

$$6+9b-2b=6$$

$$9b-2b=6-6$$

$$7b=0$$

$$\boxed{b = \frac{0}{7} \text{ or } 0}$$

