

## Gabarito lista 2 - Analítica

1) a) 
$$\begin{vmatrix} x & y & 1 \\ 4 & 2 & 1 \\ 1 & -3 & 1 \end{vmatrix} = 0$$

$$2x - 12 + y - 2 - 4y + 3x = 0$$

$$5x - 3y - 14 = 0$$

b) 
$$\begin{vmatrix} x & y & 1 \\ -2 & -2 & 1 \\ 3 & 3 & 1 \end{vmatrix} = 0$$

$$-2x - 6 + 3y + 6 + 2y - 3x = 0$$

$$-5x + 5y = 0$$

$$x - y = 0$$

2) Coeficiente linear  $\rightarrow$  a reta corta o eixo  $y$ , ou seja  $x = 0$

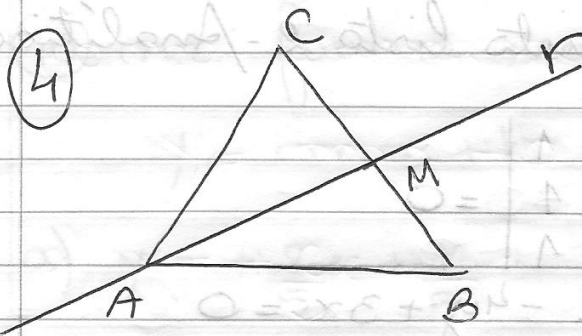
a) 
$$\begin{aligned} 5x - 3y - 14 &= 0 \\ 5 \cdot 0 - 3y &= 14 \end{aligned} \quad \wedge \quad \begin{aligned} y &= -\frac{14}{3} \end{aligned}$$

ou  $b = -\frac{14}{3}$

b) 
$$\begin{aligned} x - y &= 0 \\ -y &= 0 \end{aligned} \quad \wedge \quad \begin{aligned} y &= 0 \end{aligned} \quad \text{ou } b = 0$$

3) 
$$\left. \begin{aligned} A(5, -3) \\ B(-1, 7) \end{aligned} \right\} \begin{aligned} M(2, 2) \\ O(0, 0) \end{aligned}$$

$$\begin{vmatrix} x & y & 1 \\ 2 & 2 & 1 \\ 0 & 0 & 1 \end{vmatrix} = 0 \quad \begin{aligned} 2x - 2y &= 0 \\ x - y &= 0 \end{aligned}$$



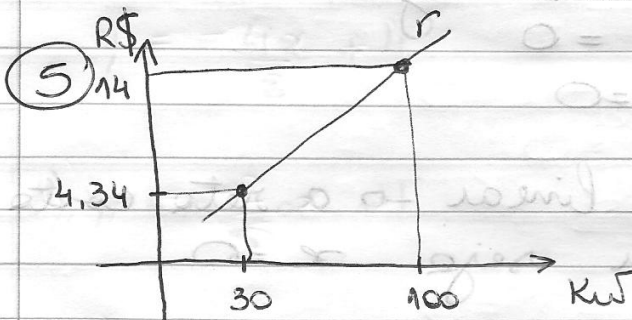
reta r  
 $AM \mid \begin{cases} A(2, -1) \\ M(1, 2) \end{cases}$

$M \rightarrow$  médio CB

$$\begin{vmatrix} x & y & 1 \\ 2 & -1 & 1 \\ 1 & 2 & 1 \end{vmatrix} = 0$$

$$\begin{aligned} -x + 4 + y + 1 - 2y - 2x &= 0 \\ -3x - y + 5 &= 0 \\ +3x + y - 5 &= 0 \end{aligned}$$

↑  
Rta



$P_1(30, 4,34)$   
 $P_2(100, 14)$

P - preço  
 C - consumo Kw

$$\begin{vmatrix} C & P & 1 \\ 30 & 4,34 & 1 \\ 100 & 14 & 1 \end{vmatrix} = 0$$

$$4,34C + 420 + 100P - 434 - 30P - 14C = 0$$

$$70P - 9,66C - 14 = 0$$

$$P = \frac{9,66C + 14}{70}$$

$$\textcircled{6} P(2, -1)$$

$$\begin{aligned} \text{a) } 3x + 2y - 4 &= 0 \\ 3(2) + 2(-1) - 4 &= 0 \\ 6 - 2 - 4 &= 0 \quad 0 = 0 \end{aligned}$$

$\textcircled{E}$

$$\begin{aligned} \text{b) } x - 3y + 1 &= 0 \\ 2 - 3(-1) + 1 &= 0 \\ 2 + 3 + 1 &= 0 \quad 6 = 0 \end{aligned}$$

$\textcircled{\neq}$

$$\textcircled{7} 2x - 4y - k = 0$$

$$\begin{aligned} 2(5) - 4(1) - k &= 0 \\ 10 - 4 - k &= 0 \end{aligned}$$

$$\boxed{k = 6}$$

$$\textcircled{8} 3x - 2y + 8 = 0$$

$$3(2) - 2(a) + 8 = 0$$

$$6 - 2a + 8 = 0$$

$$-2a = -14$$

$$\textcircled{a=7}$$

$\textcircled{9}$   $m \rightarrow$  coef. angular

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\text{a) } m = \frac{3-1}{2+4} \quad m = \frac{2}{6} = \frac{1}{3} \parallel$$

$$\text{b) } m = \frac{5 - \frac{3}{2}}{\frac{1}{4} - \frac{1}{2}} = \frac{\frac{7}{2}}{\frac{-1}{4}} = \frac{7}{2} \times \left( \frac{-4}{1} \right) = \textcircled{-14} \parallel$$

10) na forma reduzida

$$y = mx + b$$

a)  $y = +\frac{2x}{5} + \frac{1}{5}$        $m = \frac{2}{5}$        $b = \frac{1}{5}$

b)  $y = -\frac{x}{2}$        $m = -\frac{1}{2}$        $b = 0$

c)  $\frac{4x + 3y}{12} = \frac{12}{12}$   
 $y = -\frac{4x}{3} + 4$        $m = -\frac{4}{3}$        $b = 4$

d)  $y = -\frac{2}{5}x + 1$        $m = -\frac{2}{5}$        $b = 1$

11)  $y - 4 = 5(x + 3)$   
 $y = 5x + 15 + 4$   
 $y = 5x + 19$  → reduzida

12) a)  $5x - 3y - 14 = 0$   
 $-3y = -5x + 14$        $y = \frac{5x}{3} - \frac{14}{3}$  R

$$\frac{x}{14/5} + \frac{y}{-14/3} = 1$$

b)  $x - y = 0$  → não possui equação segmentária  
 $y = x$  R