

Prova Matemática Discreta – Lucas Barbosa
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$$A \cap C = \{b, e\}$$

$$\Delta > 0 \quad x_1 < x_2$$

$$\Delta = 0 \quad x_1 = x_2$$

$$\Delta < 0 \quad \text{Não existe}$$

Provas Matemática Discreta

$$1- A = \{a, b, c, d, e\}, B = \{d, e, f, g, h, m, p\},$$

$$C = \{b, e, f, g, h, i\}$$

$$1.1) (A \cap B) = \{d, e\}$$

$$(A \cap B) \cup C = \{a, b, c, d, e, f, g, h, i\}$$

$$1.2) (A \cup B) \cap (A \cap C) = \{b, e\}$$

$$(A \cup B) = \{a, b, c, d, e, f, g, h, m, p\}$$

$$(A \cap C) = \{b, e\}$$

2) Não reedentem o diagrama, usei o
da folha

$$2.1) A = \{10, 6, 9, 4, 7, 1, 3, 2\}$$

$$2.2) B = \{30, 2, 3, 1, 5, 21, 8\}$$

$$2.3) C = \{15, 33, 22, 5, 1, 7, 4\}$$

$$2.4) A \cup C = \{10, 6, 9, 4, 7, 1, 3, 2, 5, 15, 33, 22\}$$

$$2.5) A \cap B = \{2, 3, 1\}$$

$$2.6) A \cup B \cup C = \{9, 6, 10, 30, 8, 21, 15, 33, 22, 4, 7, 5, 2, 3, 1\}$$

$$2.7) (A \cup B) \cap C = \{9, 6, 10, 30, 8, 21, 2, 3, 1, 4, 7, 5\}$$

$$\begin{array}{r} 2 \\ 15 \\ \times 5 \\ \hline 75 \end{array}$$

$$\begin{array}{r} 2 \\ 15 \\ \times 4 \\ \hline 60 \end{array}$$

$$\begin{array}{r} 1 \\ 15 \\ \times 3 \\ \hline 45 \end{array}$$

$$\begin{array}{r} 125 \\ - 75 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 3 \\ 15 \\ \times 5 \\ \hline 80 \end{array}$$

$$\begin{array}{r} 2 \\ 25 \\ \times 5 \\ \hline 125 \end{array}$$

data
fecha

☐ D ☐ S ☐ T ☐ Q ☐ Q ☐ S ☐ S
☐ D ☐ L ☐ M ☐ M ☐ J ☐ V ☐ S

3 $A = \{x \in \mathbb{N} / x \text{ é primo, menor do que } 25\}$

$$A = \{2, 3, 5, 7, 11, 13, 17, 19, 23\}$$

$$b = \{x \in \mathbb{R} / 5x^2 + 3x = 18x\} = \{0, -10, 20, 50, 90, 140\}$$

$$5x^2 + 3x = 18x$$

$$5x^2 + 3x - 18x = 0$$

$$5x^2 - 15x = 0$$

$$p(1) = 5 \cdot 1^2 - 15 \cdot 1 = 0$$

$$p(1) = 5 - 15$$

$$p(1) = -10$$

$$p(5) = 5 \cdot 5^2 - 15 \cdot 5$$

$$p(5) = 125 - 75$$

$$p(5) = 50$$

$$p(0) = 5 \cdot 0^2 - 15 \cdot 0$$

$$p(0) = 0 - 0 = 0$$

$$p(-1) = 5 \cdot (-1)^2 - 15 \cdot (-1)$$

$$p(-1) = 5 + 15$$

$$p(-1) = 20$$

$$p(2) = 5 \cdot 2^2 - 15 \cdot 2$$

$$p(2) = 20 - 30 = -10$$

$$p(2) = -10$$

$$p(-2) = 5 \cdot (-2)^2 - 15 \cdot (-2)$$

$$p(-2) = 20 + 30$$

$$p(-2) = 50$$

$$p(3) = 5 \cdot 3^2 - 15 \cdot 3$$

$$p(3) = 45 - 45$$

$$p(3) = 0$$

$$p(-3) = 5 \cdot (-3)^2 - 15 \cdot (-3)$$

$$p(-3) = 45 + 45$$

$$p(-3) = 90$$

$$p(4) = 5 \cdot 4^2 - 15 \cdot 4$$

$$p(4) = 80 - 60$$

$$p(4) = 20$$

$$p(-4) = 5 \cdot (-4)^2 - 15 \cdot (-4)$$

$$p(-4) = 80 + 60$$

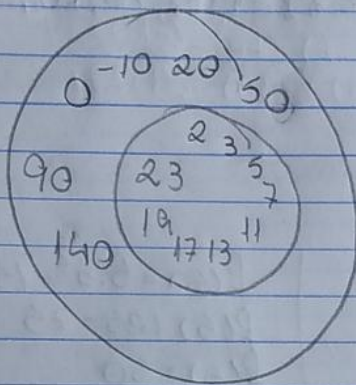
$$p(-4) = 140$$

data
fecha

D S T Q Q S S
D L M M J V S

$$BUA = \{0, -10, 20, 50, 90, 140, 2, 3, 5, 7, 11, 13, 17, 19, 23\}$$

$$(BUA) \cap A = \{2, 3, 5, 7, 11, 13, 17, 19, 23\}$$



4 - Determinar x e y tal que:

$$\begin{cases} \frac{1}{2}x + 5y = 2y + 2 & \cdot -\frac{3}{4} \\ -7x + \frac{3}{4}y + \frac{1}{3}x - 5 = 5 & \cdot 12 \end{cases}$$

↓

42

D

12

$$\left\{ \begin{array}{l} \frac{1}{2}x + 5y = 2y + 2 \end{array} \right. \longrightarrow \frac{1}{2}x = -3y + 2 \quad (2)$$

$$\left\{ \begin{array}{l} 7x + \frac{3y}{4} + \frac{1}{3}x - 5 \end{array} \right. \quad \frac{1}{2}x = -3y + 2$$

$$x = -6y + 4$$

$$7 \cdot (-6y + 4) + \frac{3y}{4} - \frac{6y + 4}{3} - 5$$

$$x = -6 \cdot \left(\frac{-23}{45} \right) + 4$$

$$\frac{-42y + 28}{1} + \frac{3y}{4} - \frac{6y + 4}{3} - \frac{5}{1}$$

$$x = \frac{138}{45} + \frac{4}{1}$$

$$-42y + 28 + 3y - 6y - 5$$

$$x = 138 + 180 \cdot 45 \quad 3$$

$$-45y = -28 + 5$$

$$x = 318$$

$$45y = -23$$

$$y = \frac{-23}{45}$$

$$\begin{array}{r|l} 15 & 3 \\ 5 & 5 \\ 1 & 45 \end{array}$$