

# Projeto Mathematical Ramblings

bit.ly/mathematicalramblings

Resolva, no universo  $\mathbb{R}$  a equação  $|x| \cdot |x - 2| = 3x - 6$ .

$$x < 0 \text{ (I)} \Rightarrow (-x) \cdot (2 - x) = 3x - 6 \Rightarrow (x = 2 \vee x = 3) \text{ (II)}$$

$$\text{(I) e (II)} \Rightarrow S_1 = \emptyset$$

$$0 \leq x < 2 \text{ (III)} \Rightarrow x(2 - x) = 3x - 6 \Rightarrow (x = -3 \vee x = 2) \text{ (IV)}$$

$$\text{(III) e (IV)} \Rightarrow S_2 = \emptyset$$

$$x \geq 2 \text{ (V)} \Rightarrow x(x - 2) = 3x - 6 \Rightarrow (x = 2 \vee x = 3) \text{ (VI)}$$

$$\text{(V) e (VI)} \Rightarrow S_3 = \{2, 3\}$$

$$\bigcup_{i=1}^3 S_i = \{2, 3\}$$

---

Documento compilado em Monday 12<sup>th</sup> August, 2019, 13:15, UTC +0.

Comunicar erro: "a.vandre.g@gmail.com".