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Turma: CTII 348

Prontuário: CB1990209

Disciplina: Matemática

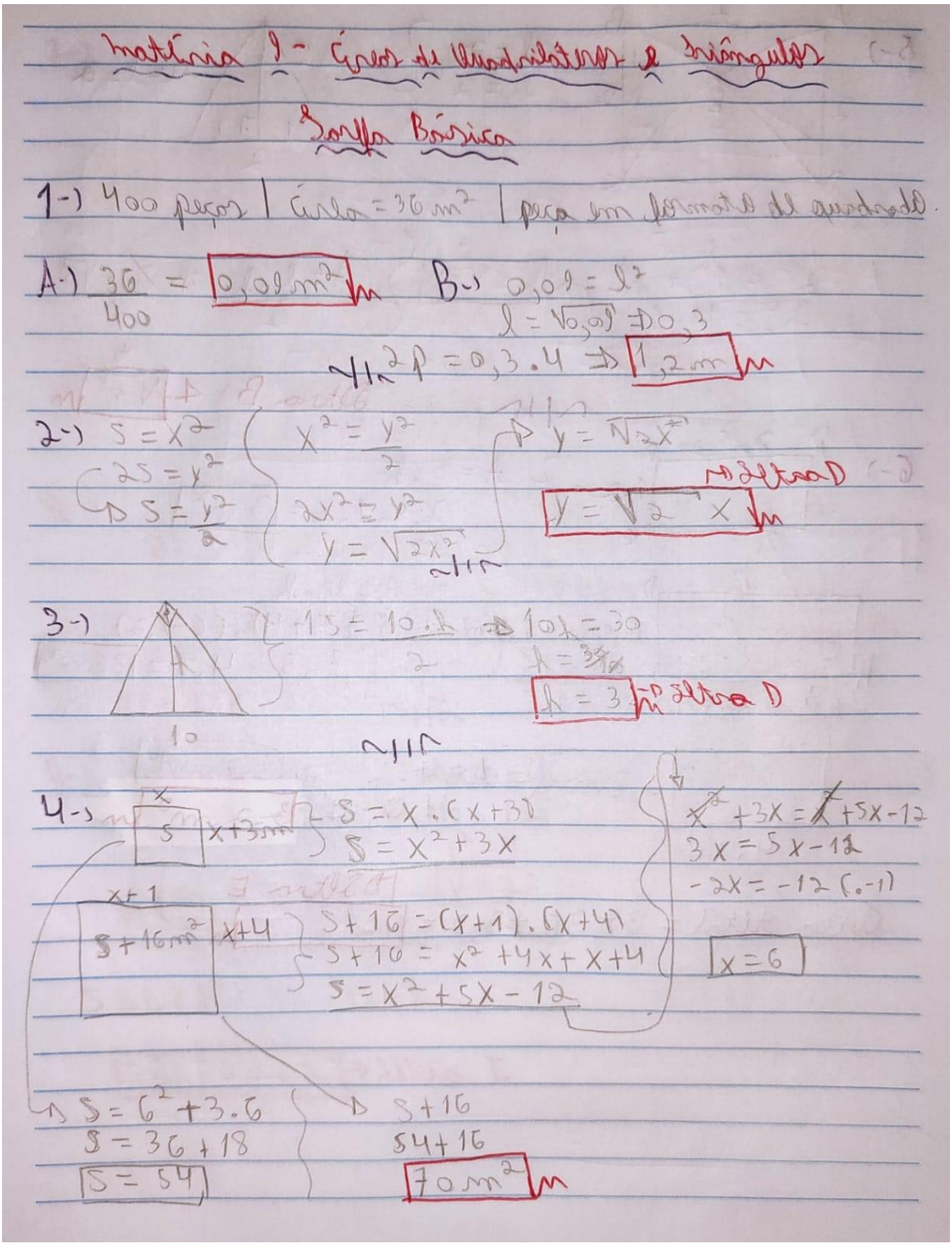
IFSP - Câmpus Cubatão

Tarefa Básica 09

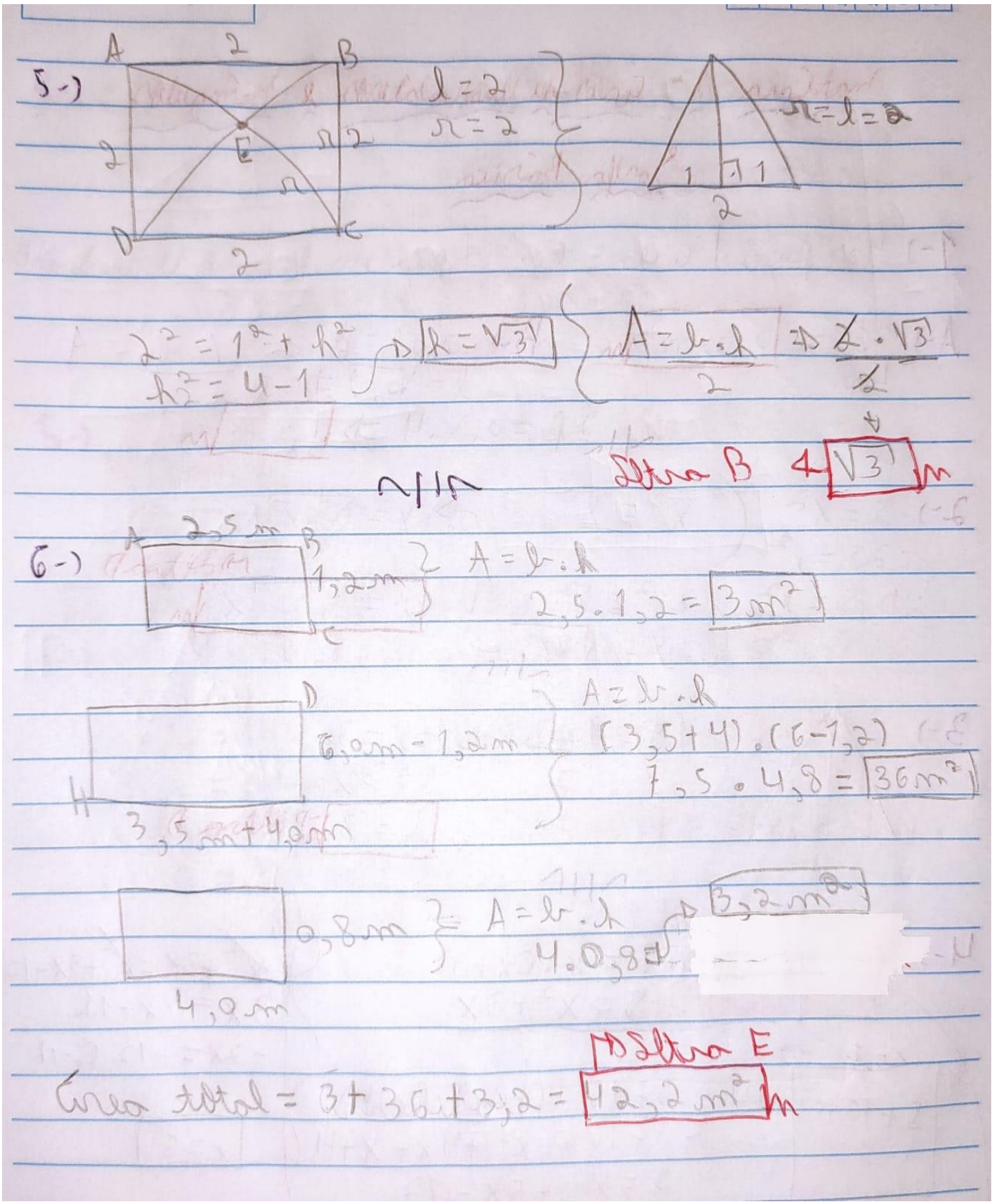
Área de Quadriláteros e Triângulos

(Fotos nas páginas seguintes)

Exercícios 1, 2, 3 e 4:

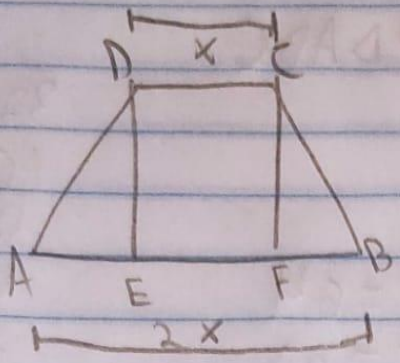


Exercícios 5 e 6:



Exercícios 7, 8 e 9:

7-)



$S_{ABCD} = 36\ cm^2$

$AB = 2 \cdot CD$

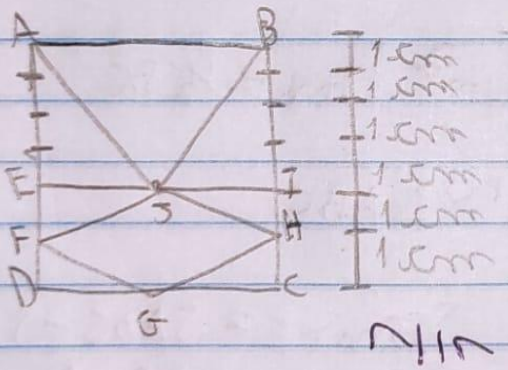
$S_{CDEF} = ?\ cm^2$

$S_{ABCD} = \frac{(B+b)\cdot h}{2} \Rightarrow 36 = \frac{(2x+x)\cdot h}{2} \Rightarrow \therefore$

$\Rightarrow 72 = 3x \cdot h \Rightarrow x \cdot h = 24$

$x \cdot h = S_{CDEF} = 24\ cm^2$ → letra E

8-)

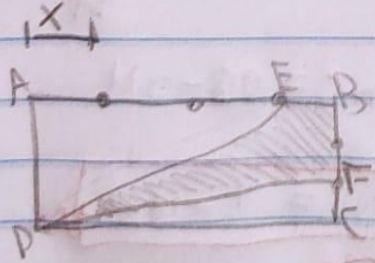


$S_{ABJ} = \frac{6 \cdot 4}{2} = \frac{24}{2} \Rightarrow 12\ cm^2$

$S_{FGHI} = \frac{6 \cdot 2}{2} = 6\ cm^2$

$\frac{S_{FGHI}}{S_{ABJ}} = \frac{6 \cdot 6}{12 \cdot 6} \Rightarrow \frac{1}{2}$ → letra D

9-)



$S_{ABCD} = 4x \cdot 3x$

$48 = 12x^2$

$x^2 = 4$

$x = 2$

$S_{ADE} = \frac{(2 \cdot 3) \cdot (2 \cdot 3)}{2}$

$S_{ADE} = 18$

$S_{CDF} = \frac{(2 \cdot 4) \cdot 2}{2}$

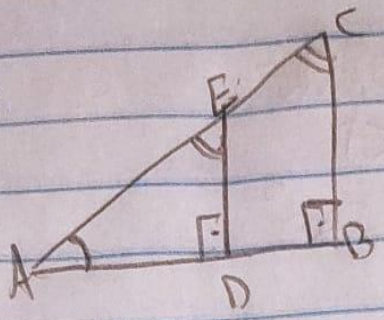
$S_{CDF} = 8$

$S_{BEFD} = 48 - 18 - 8$

$S_{BEFD} = 22$ → letra E

Exercícios 10 e 11:

10-)



$\triangle ADE \sim \triangle ABC$

$\left(\frac{AD}{AB}\right)^2 = \frac{S_{ADE}}{S_{ABC}}$

$\left(\frac{AD}{8}\right)^2 = \frac{\frac{1}{2} \cdot S_{ABC}}{S_{ABC}}$

$\frac{AD^2}{64} = \frac{1}{2}$

$2AD^2 = 64$

$AD^2 = 32$

$AD = \sqrt{32}$

$AD = \sqrt{2^2 \cdot 2 \cdot 2}$

$AD = 2 \cdot 2\sqrt{2}$

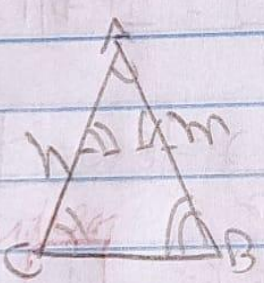
32 | 2
16 | 2
8 | 2
4 | 2
2 | 2
1

Letra A

$AD = 4\sqrt{2}$

N/A

11-)



$S_{ABC} = 96\,m^2$ | $S_{mn} = \frac{1}{2} BC$

$\triangle Amn \sim \triangle ABC$

$\frac{S_{Amn}}{S_{ABC}} = \frac{1}{4}$

$S_{Amn} = \frac{1}{4} S_{ABC}$

$S_{BmnC} = S_{ABC} - S_{Amn}$

$S_{BmnC} = 96 - \frac{1}{4} \cdot 96$

$S_{BmnC} = 96 - 24$

$S_{BmnC} = 72\,m^2$