COLEGIO ALMA'S
bilingual school

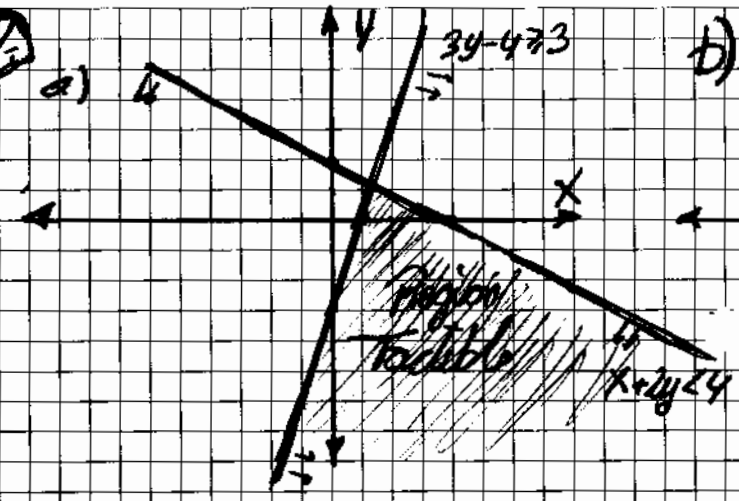
APELLIDOS Y NOMBRE: Corrección Examen

CURSO: 4ºESO Nº 2ª Evaluación

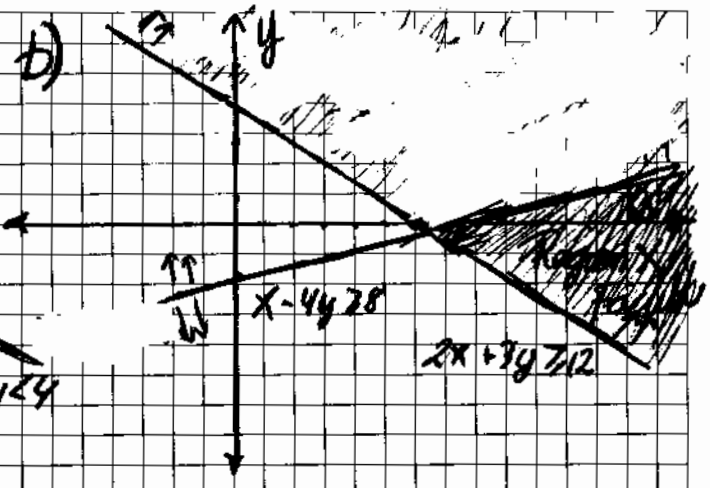
FECHA: 02-03-2019 ASIGNATURA: Matemáticas

1.-

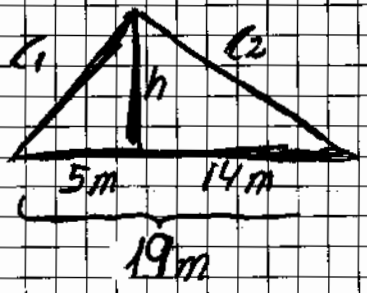
a)



b)



2.-



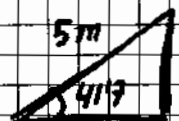
$c_1 = \sqrt{5 \cdot 19} = \sqrt{95} = \boxed{9'74\,m}$

$c_2 = \sqrt{14 \cdot 19} = \sqrt{266} = \boxed{16'30\,m}$

$h = \sqrt{5 \cdot 14} = \sqrt{70} = \boxed{8'4\,m}$

3.-

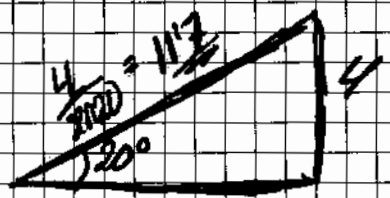
a)



$5 \operatorname{sen} 41'7 = \underline{3'33\,m}$

$5 \cos 41'7 = \underline{3'73\,m}$

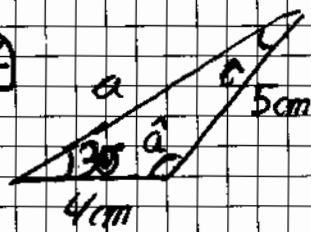
b)



$\frac{4}{tg\,30} = \underline{10'99}$

4.-

a)

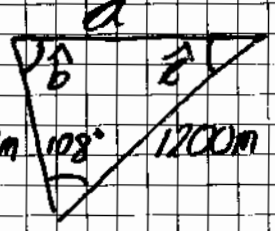


$\frac{\operatorname{sen} 30}{5} = \frac{\operatorname{sen} \hat{c}}{4}$ $\quad \hat{c} = \operatorname{arcsen} \frac{4 \operatorname{sen} 30}{5} = \underline{23'57^\circ}$

$\hat{a} = 180 - 30 - 23'57 = 126'43^\circ$

$\frac{\operatorname{sen} 126'43}{a} = \frac{\operatorname{sen} 30}{5}$ $\quad a = \frac{5 \operatorname{sen} 126'43}{\operatorname{sen} 30} = \underline{8'04\,cm}$

b)



$a = \sqrt{700^2 + 1200^2 - 2 \cdot 700 \cdot 1200 \cos 108} = \underline{1564'98\,m}$

$\frac{\operatorname{sen} 108}{1564'98} = \frac{\operatorname{sen} \hat{b}}{1200}$ $\quad \hat{b} = \operatorname{arcsen} \frac{1200 \operatorname{sen} 108}{1564'98}$

$\hat{b} = \underline{46'82^\circ}$

$\hat{c} = 180 - 108 - 46'82 = \underline{25'18^\circ}$

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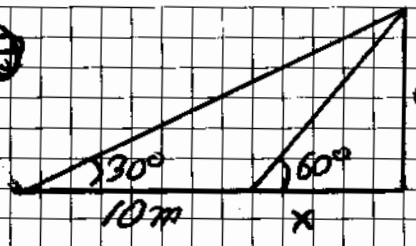
5.



$tg60 = \frac{y}{x}$ $\quad tg30 = \frac{y}{x+10}$

$y = x\,tg60$ $\quad y = x\,tg30 + 10\,tg30$

$x\,tg60 = x\,tg30 + 10\,tg30$

$x = \frac{10\,tg30}{tg60 - tg30} \rightarrow y = \frac{10\,tg30\,tg60}{tg60 - tg30} = 5\sqrt{3}$

$y =$ **8'66 metros**

6.

a) $P(-1,2)$ $\vec{v}(1,-3)$

b) $P(3,-1)$ $\vec{v}(-1,0)$

c) $P(1,2)$ $\vec{v}(2,3)$

d) $P(2,-1)$ $\vec{v}(5,-1)$

e) $P(0,1)$ $\vec{v}(5,3)$

f) $P(3,0)$ $\vec{v}(1,2)$

7.

a) $\vec{v}(1,2)$ $\quad \vec{u}(1,2) \rightarrow 2x - y = 0$ $\quad d = \frac{|6-5+0|}{\sqrt{5}} \neq 0$

$P(3,5)$

Paralelas

b) $\vec{v}(2,3)$, $\vec{u}(-3,2)$ $\rightarrow \vec{u} \nparallel \vec{v} \Rightarrow$ Secantes

c) $\vec{u}(2,3)$, $\vec{v}(-3,2)$ $\rightarrow \vec{u} \nparallel \vec{v} \rightarrow$ Secantes

8.

$\left.\begin{matrix} x = -2 + \lambda \\ y = -3 - 3\lambda \end{matrix}\right\} \rightarrow \vec{u}(1,-3)$ $\quad \vec{v}(2,3)$

$\alpha = \arccos \frac{7}{\sqrt{10}\sqrt{13}} =$ **52'12°**

9.

$d = \frac{|16+4-5|}{\sqrt{9+16}} = \frac{5}{5} =$ **1**

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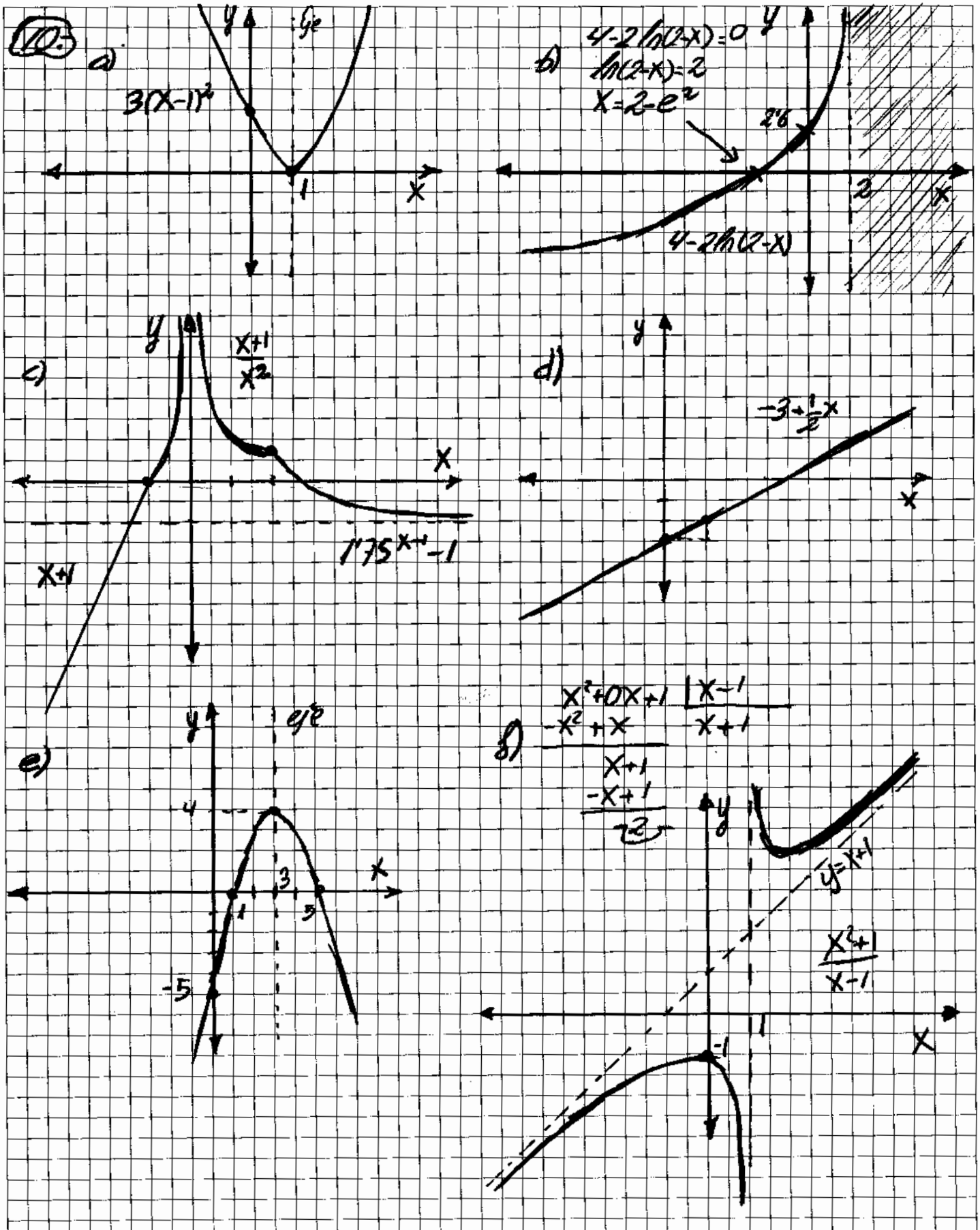

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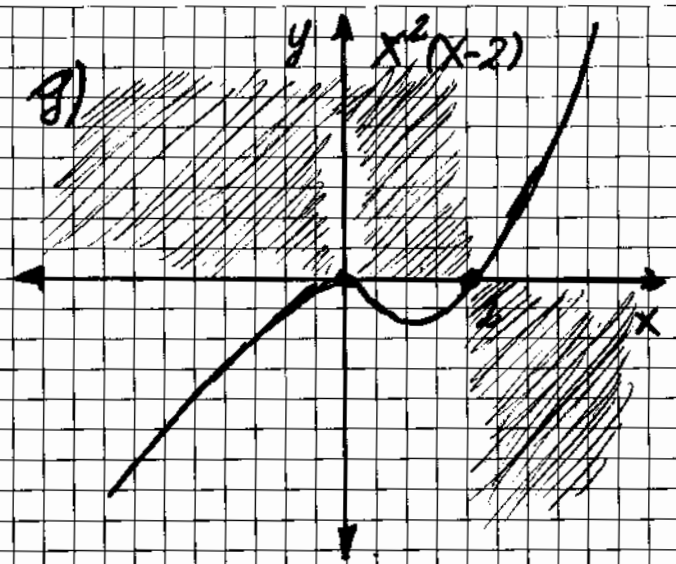
a)



b)