COLEGIO ALMA'S
bilingual school

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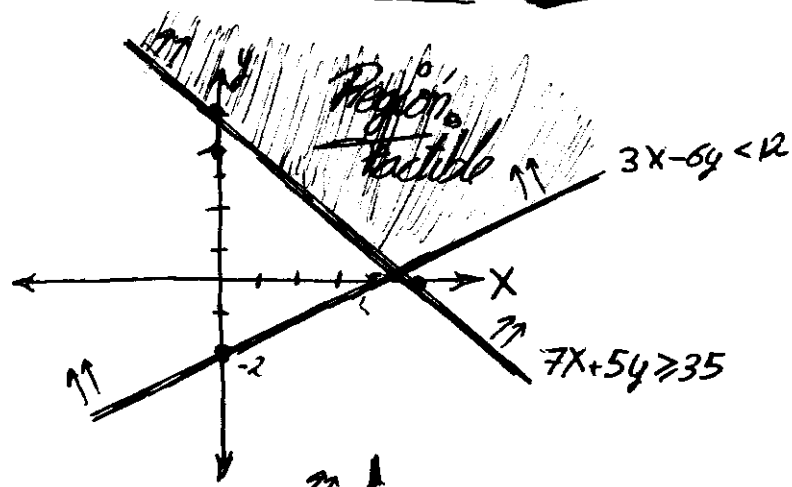
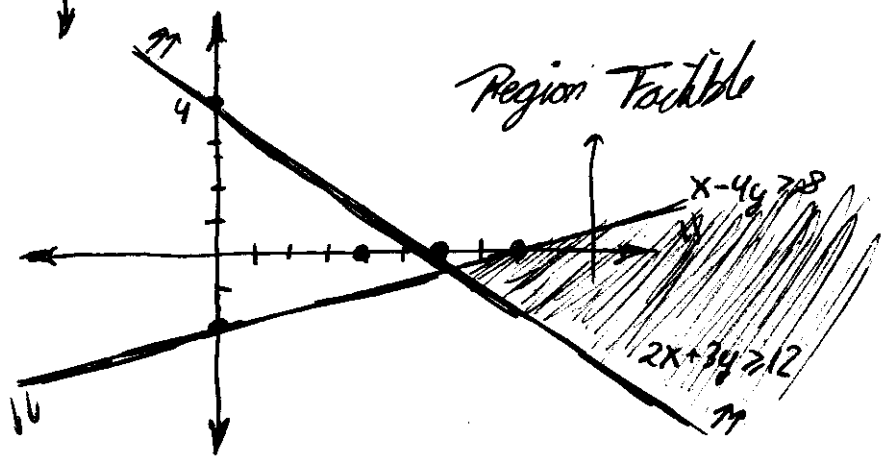
Corrección Recuperación 2ºEO - Matemáticas - 4ºESO - 06-04-18

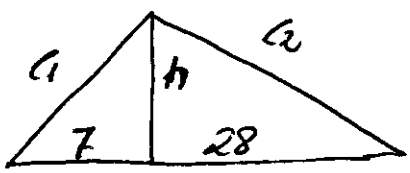
1.- a) $3x-6y<12$
$7x+5y\geq 35$



b) $2x+3y\geq 12$
$x-4y\geq 8$



2.-



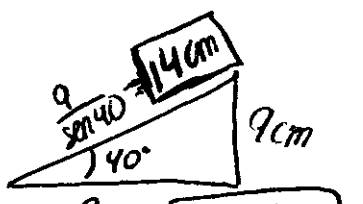
$c_1^2 = 7\cdot 35 \rightarrow \boxed{c_1 = 7\sqrt{5}}$

$c_2^2 = 28\cdot 35 \rightarrow \boxed{c_2 = 14\sqrt{5}}$

$h^2 = 7\cdot 28 \rightarrow \boxed{h = 14}$

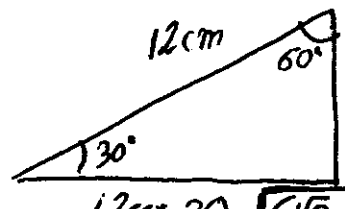
3.-

a)



$\frac{9}{tg40} = \boxed{10'73\,cm}$

b)



$12\,sen30 = \boxed{6\,cm}$

$12\cos 30 = \boxed{6\sqrt{3}\ cm}$

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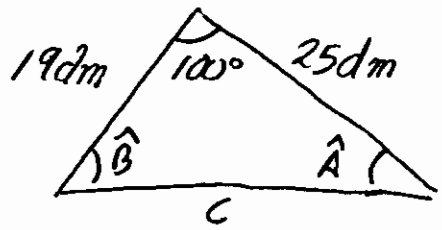
4.

a)



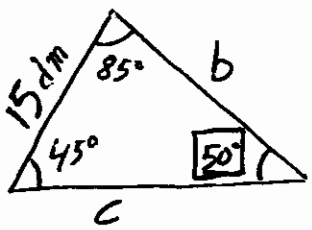
$c = \sqrt{19^2 + 25^2 - 2 \cdot 19 \cdot 25 \cdot \cos 100} = \boxed{33'93\ dm}$

$\frac{\text{sen}100}{33'93} = \frac{\text{sen}\hat{A}}{19} \rightarrow \hat{A} = \text{arcsen}\ \frac{19\ \text{sen}100}{33'93}$

$\boxed{\hat{A} = 46'52°}$

$\hat{B} = 180 - 100 - 46'52 = \boxed{33'48°}$

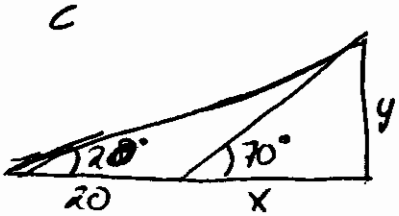
b)



$\frac{\text{sen}45}{b} = \frac{\text{sen}50}{15} \rightarrow b = \frac{15\ \text{sen}45}{\text{sen}50} = \boxed{13'85\ dm}$

$\frac{\text{sen}85}{c} = \frac{\text{sen}50}{15} \rightarrow c = \frac{15\ \text{sen}85}{\text{sen}50} = \boxed{19'51\ dm}$

5.



$tg\,70 = \frac{y}{x} \rightarrow y = x\,tg\,70$

$tg\,20 = \frac{y}{x+20} \rightarrow y = x\,tg\,20 + 20\,tg\,20$

$x(tg\,70 - tg\,20) = 20\,tg\,20$

$x = \frac{20\,tg\,20}{tg\,70 - tg\,20} \longrightarrow y = \frac{20\,tg\,20\,tg\,70}{tg\,70 - tg\,20} = \boxed{8'39\ m}$

6.

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

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

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

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

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

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

7.

a) $\vec{v}_1 \nparallel \vec{v}_2 \Rightarrow$ Secantes. $\vec{v}_1 \perp \vec{v}_2$ Son Perpendiculares $90°$

b) $\vec{v}_1(3,2)$, $\vec{v}_2(3,2)$ | $\vec{v}_1 \parallel \vec{v}_2$, $P_2(1,4)$

$d = \frac{|12 - 12 - 12|}{\sqrt{9+4}} \neq 0 \Rightarrow$ Paralelas

c) $\vec{v}_1(1,6)$, $\vec{v}_2(1,6)$ | $\vec{v}_1 \parallel \vec{v}_2$, $P(2,2)$

$d = \frac{|12 - 2 - 10|}{\sqrt{1+36}} = 0 \Rightarrow$ Coincidentes

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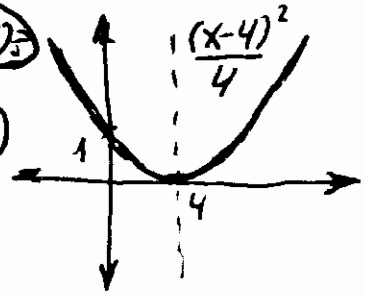
8) $\vec{v}_1(1,1)$, $\vec{v}_2(1,1)$ } Son paralelas luego no tienen ángulo $\vec{v}_1 \parallel \vec{v}_2$

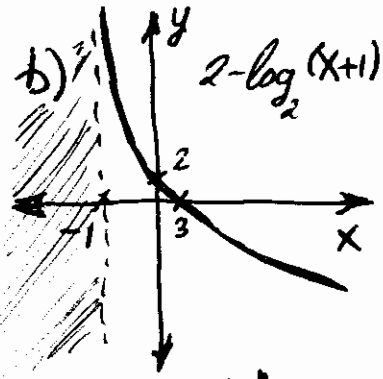
9) $d = \dfrac{|6-20+4|}{\sqrt{9+16}} = 0 \rightarrow$ El pto está contenido en la recta.

10)

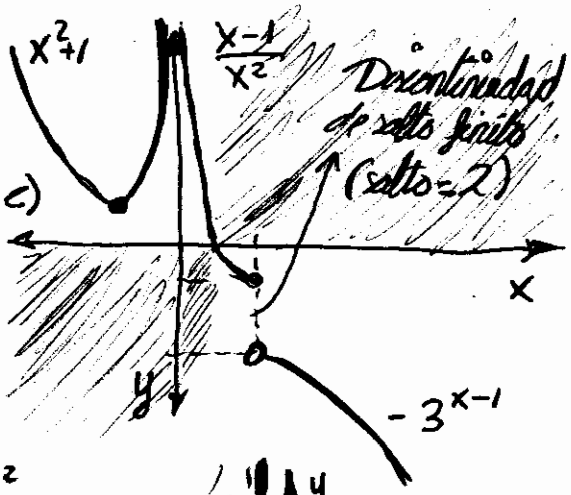
a) $\dfrac{(x-4)^2}{4}$



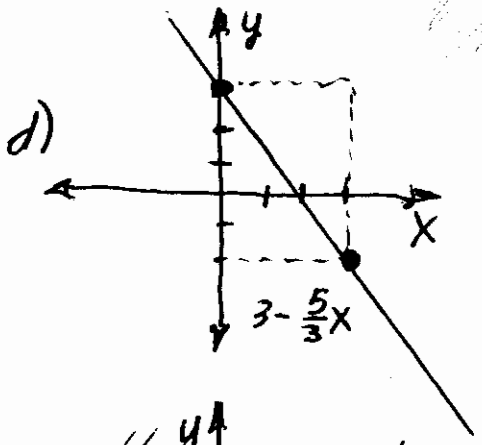
b) $2-\log_2(x+1)$



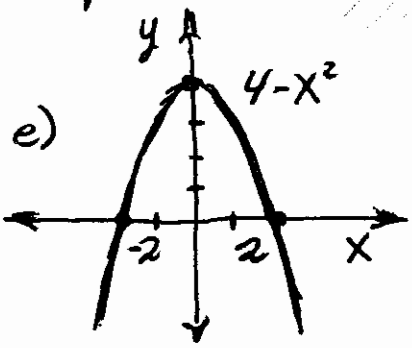
c) $\dfrac{x^2+1}{x-1}$ $\dfrac{x-1}{x^2}$ Discontinuidad de salto finito (salto = 2)



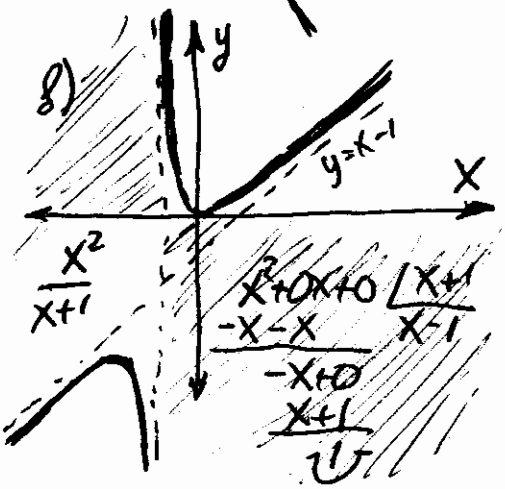
d) $3-\dfrac{5}{3}x$



e) $4-x^2$

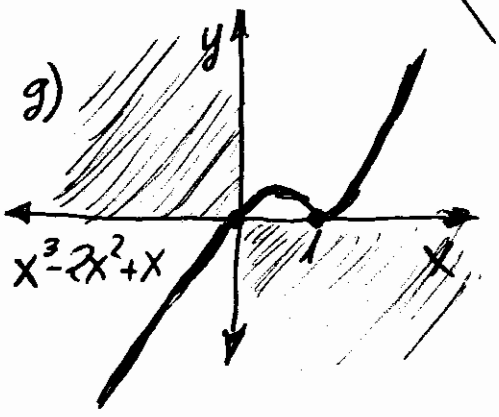


f) $\dfrac{x^2}{x+1}$ $y=x-1$



$x^2+0x+0 \;|\; x+1$
$-x-x \qquad x-1$
$-x+0$
$x+1$
1

g) x^3-2x^2+x



h) $x = \dfrac{\log_5 3 - 1}{2}$ $3-5^{2x+1}$