

PROBABILIDAD

(1)

① a)

	1	2	3	4	5	6
1	o	o	o	o	o	o
2	o	o	o	o	o	o
3	o	o	o	o	o	o
4	o	o	o	o	o	o
5	o	o	o	o	o	o
6	o	o	o	o	o	o

□ = Suma 6 $\Rightarrow p(x=6) = \frac{5}{36}$

o = Suma 7

$- p(x > 6) = \frac{21}{36} \triangle$

$- p(x=7/x > 6) = \frac{p(x=7 \cap x > 6)}{p(x > 6)} = \frac{6}{21}$

b/

x_i	p_i	x_i points	$x_i p_i$
= 6	$\frac{5}{36}$	3	$\frac{15}{36}$
> 6	$\frac{21}{36}$	1	$\frac{21}{36}$
< 6	$\frac{10}{36}$	-K	$-\frac{10K}{36}$

Si (negs) just $\Sigma(x) = \mu = 0$

$\Sigma x_i p_i = \frac{36 - 10K}{36} \Rightarrow 0 \rightarrow 36 - 10K = 0$
 $\boxed{K = 3.6}$

Dist. Binomial

② a) i) $\mu = n \cdot p_i = 600 \cdot 0.4 = \underline{240 \text{ caras}}$

ii) $\text{Var}(x) = n \cdot p(1-p) = 600 \cdot 0.4 \cdot 0.6 = 144$

$\sigma = \sqrt{\text{Var}(x)} = \sqrt{144} = \underline{12}$

b) $p(x_i < (240 + 12)) = p(x_i < 252) \xrightarrow{\text{C.G.}} p(x_i < 252) = \underline{0.8512}$

③ $p(Y) = 0.4$
 $p(F) = 0.3$
 $p(Y \cup F) = 0.6$

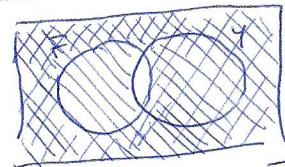
$p(\bar{Y}) = 0.6$
 $p(\bar{F}) = 0.7$
 $p(Y \cup F) = 0.4$

$p(\bar{Y} \cap \bar{F}) = ?$

por leyes de Morgan = $p(\overline{Y \cup F}) = 1 - 0.6 = \underline{0.4}$
 terminado.

FORMA ① \uparrow

FORMA ② $p(\bar{Y} \cap \bar{F}) = p(\bar{Y}) + p(\bar{F}) - p(\bar{Y} \cap \bar{F})$



\bar{Y}
 \bar{F}

$\bar{Y} \cap \bar{F} = \text{region}$

$\bar{Y} \cap \bar{F} = 1 - p(Y \cup F)$

$p(\bar{Y} \cap \bar{F}) = 1 - p(Y \cup F) = \underline{0.4}$

CON DATOS INICIALES: 2

$p(Y \cup F) = p(Y) + p(F) - p(Y \cap F)$

$0.6 = 0.4 + 0.3 - p(Y \cap F)$

$\boxed{p(Y \cap F) = 0.1}$

$p(\bar{Y} \cap \bar{F}) = 0.6 + 0.7 - p(\bar{Y} \cap \bar{F})$

$0.4 = 0.6 + 0.7 - p(\bar{Y} \cap \bar{F}) \rightarrow \boxed{p(\bar{Y} \cap \bar{F}) = 0.4}$

