

BLOQUES LÓGICOS



Basado en un trabajo de
Josefa Fernández Sucasas

R. Vázquez

1. Distinguir las propiedades de cada objeto.

2. Establecer distintos tipos de relaciones entre los objetos

- Clasificación
- Inclusión
- Intersección
- Conjunto complementario
- Biyecciones
- Ordenaciones

Material no estructurado

Botones:

de metal, madera, plástico, ...
con dos agujeros, cuatro agujeros, sin agujeros
redondos, cuadrados,

Animales:

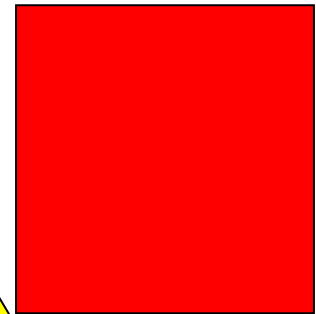
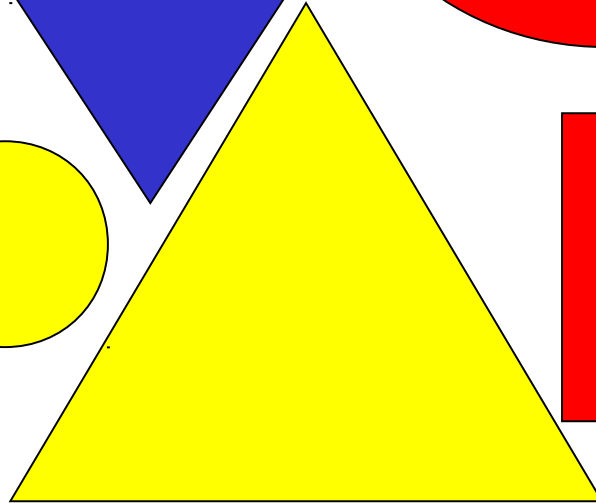
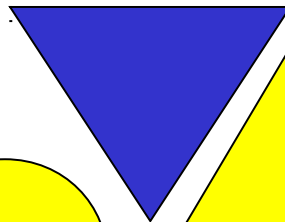
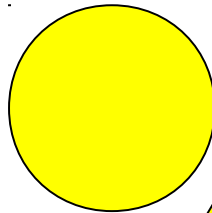
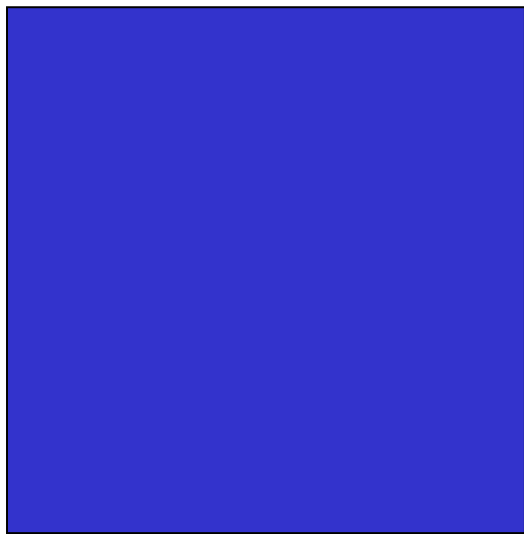
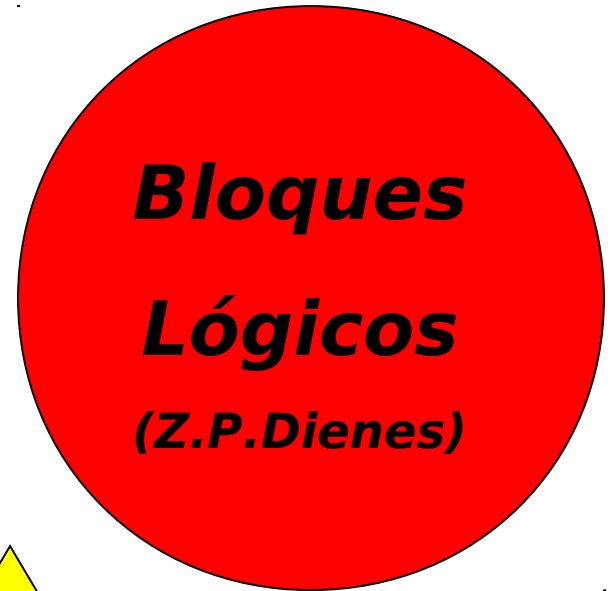
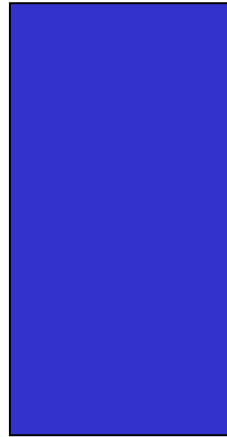
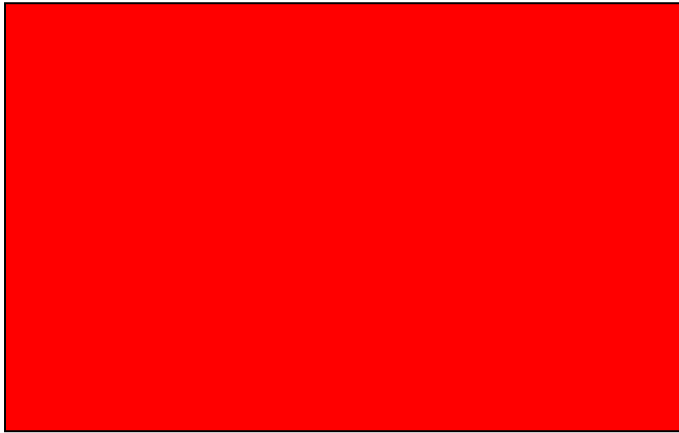
con dos patas, cuatro patas, sin patas
con plumas, pelo, escamas
salvajes, domésticos, ...

Frutas

Hojas

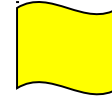
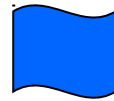
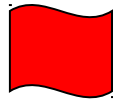
Baraja

Material estructurado

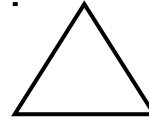
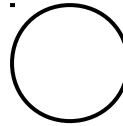
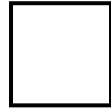


que son 48 bloques con cuatro atributos

Color



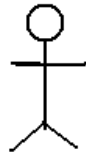
Forma



Grosor



Tamaño



1. Manipulación libre

2. Observación dirigida

Construir una figura y hacer preguntas sobre ella.

Buscar bloques del mismo color

Buscar bloques de la misma forma

Hacer hileras. ¿Está hecha con algún criterio?

¿Hay dos bloques iguales?

3 Distinguir atributos

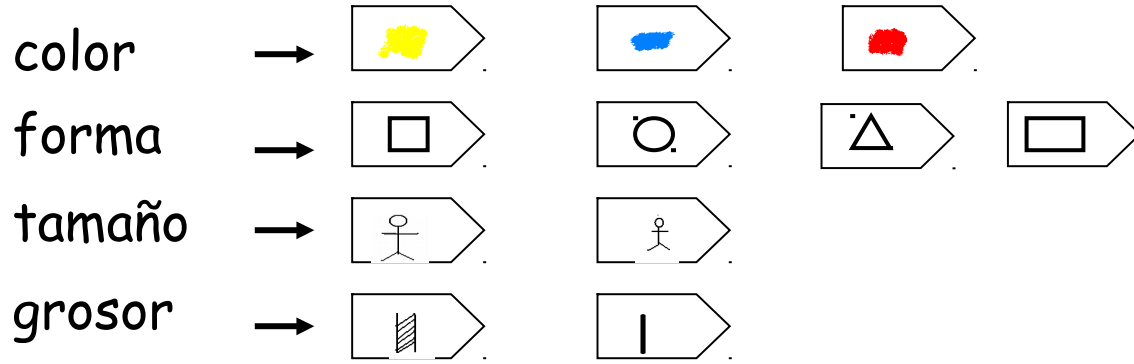
Distinguir grande - pequeño

Distinguir grueso - fino

4. Presentar etiquetas

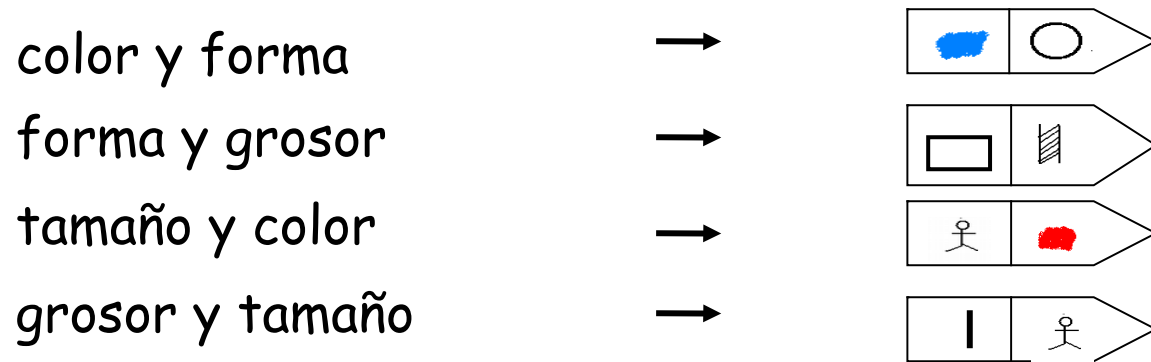
Sencillas

(Con un atributo)

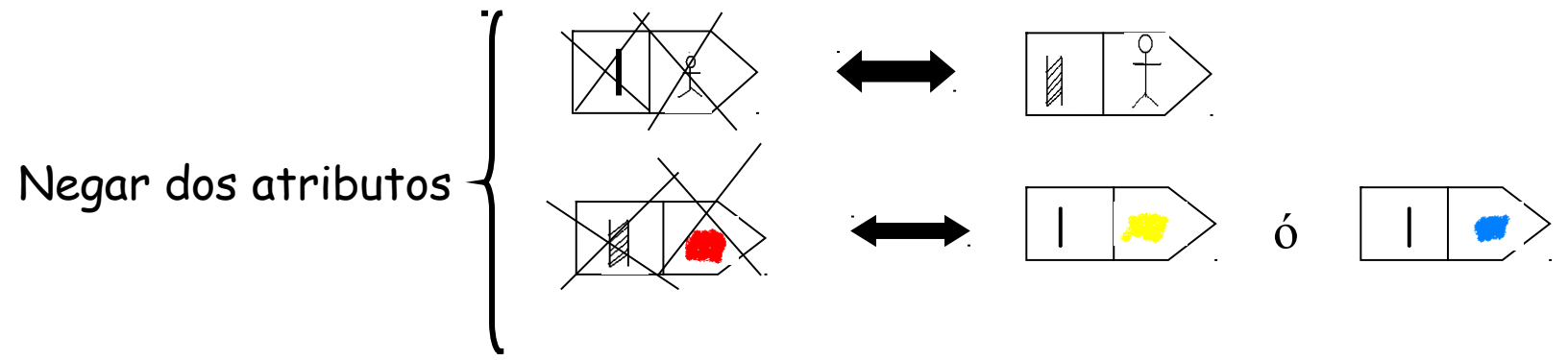
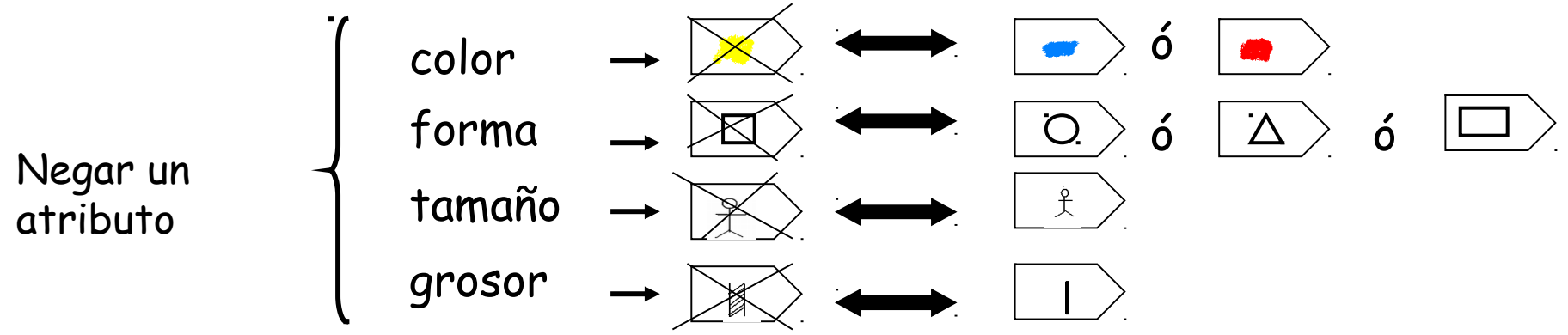


Dobles

(Con dos atributos)



5. Presentar etiquetas negativas



Atributos de bloques

Teniendo un bloque en la mano...

Describirlo con palabras

En positivo

En negativo

Describirlo con etiquetas

En positivo

En negativo

El profe...

Describe un bloque con palabras

En positivo

En negativo

y coger el bloque
del que se está hablando

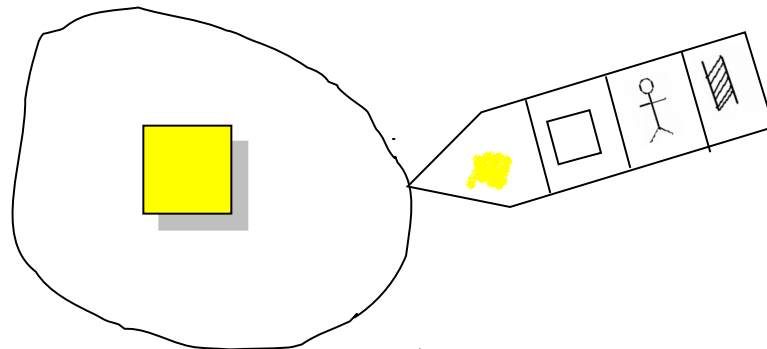
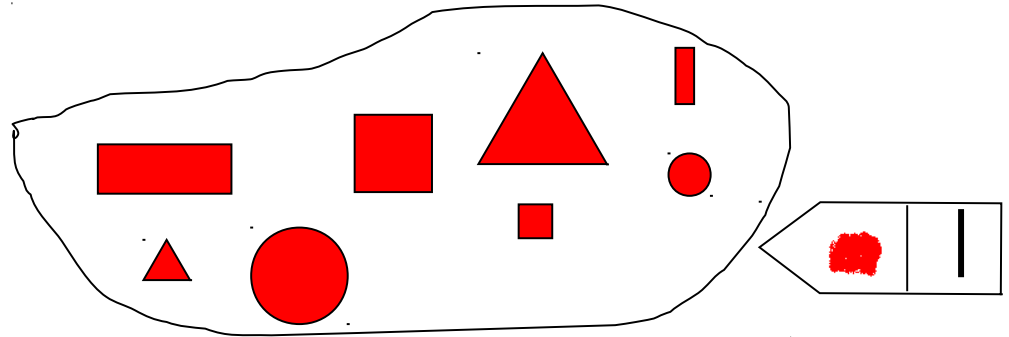
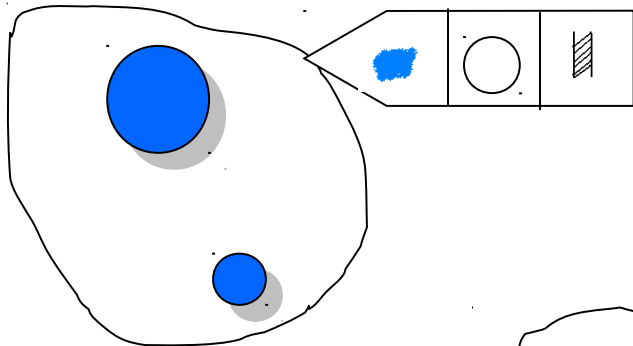
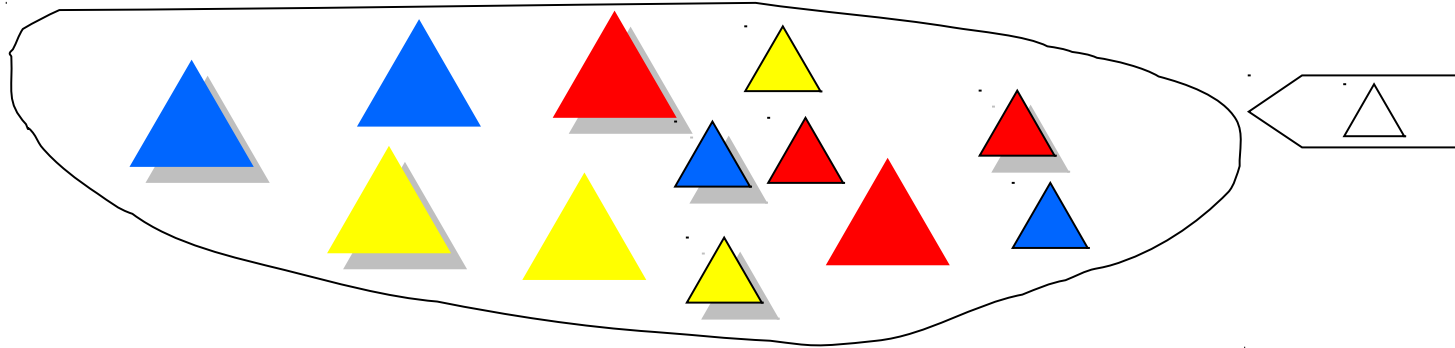
Describe un bloque con etiquetas

En positivo

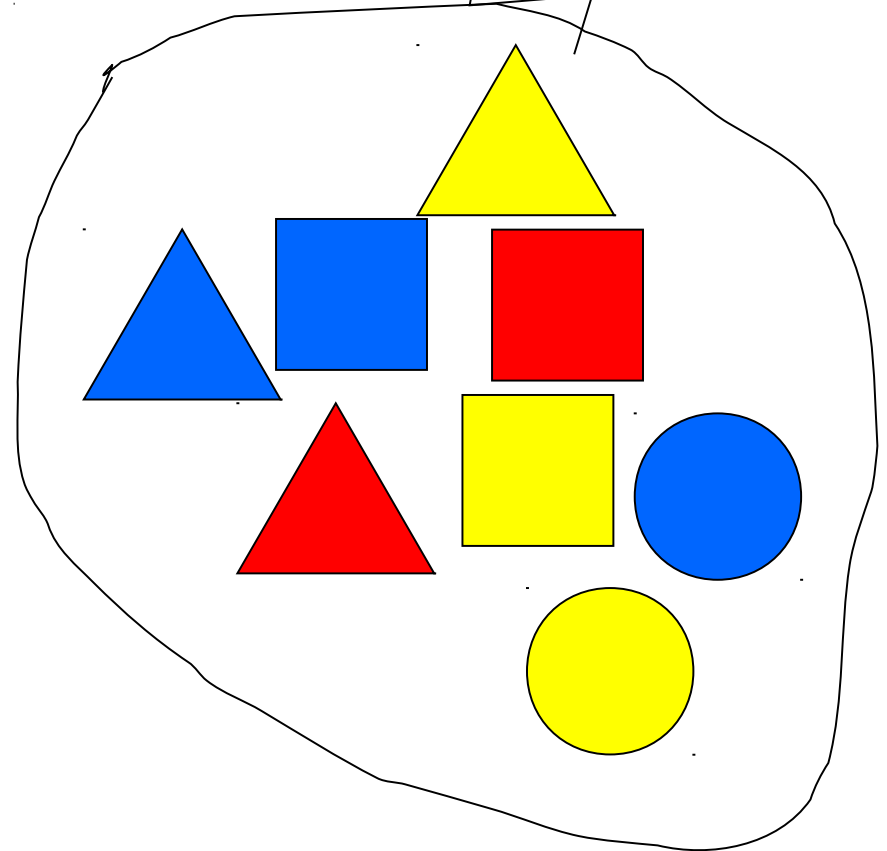
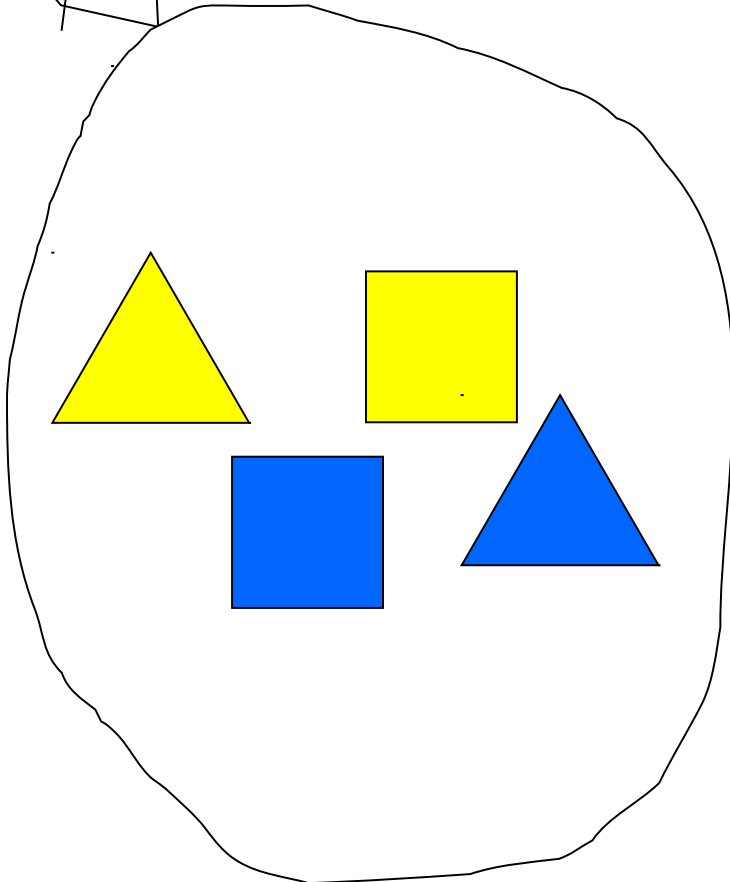
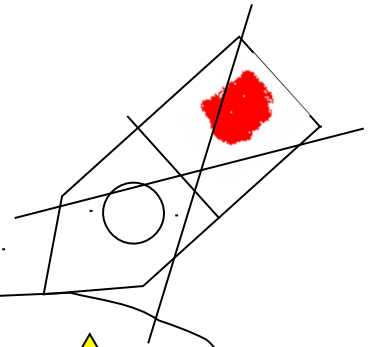
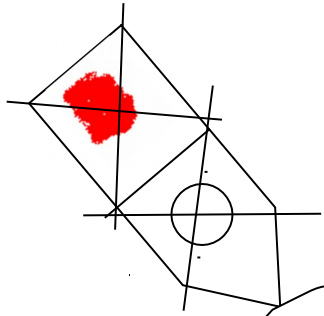
En negativo

y coger el bloque
del que se está hablando

Etiquetar estas clases



Coger los bloques que...

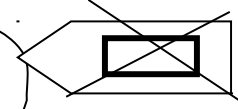


Etiquetar estas clases

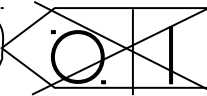
Todos los cuadrados

Todos los círculos

Todos los triángulos



Todos los bloques menos los círculos delgados

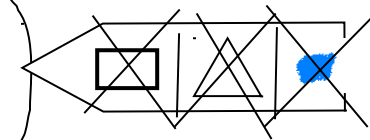


Círculos amarillos

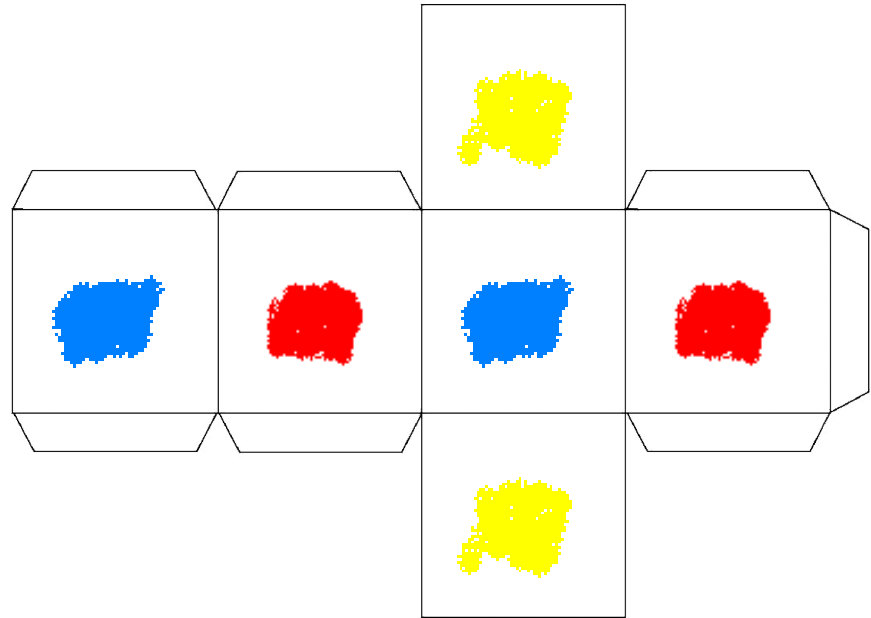
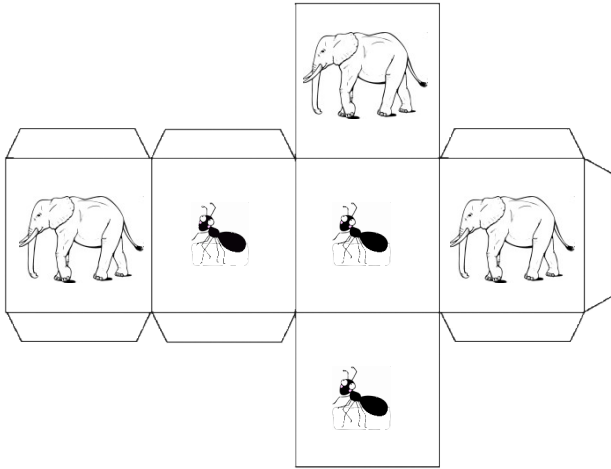
Círculos rojos

Cuadrados amarillos

Cuadrados rojos








Juegos con dados



Tablas

Tablas de doble entrada


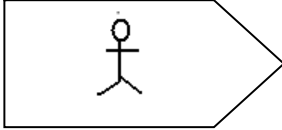

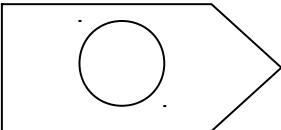
Una sola forma y dos tamaños (2 bloques en cada celda)

Dos formas y dos tamaños (4 bloques)

Tres formas y dos tamaños (6 bloques)

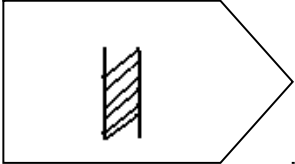
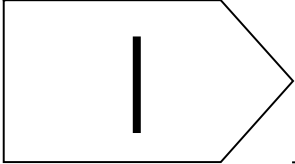
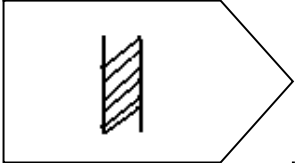
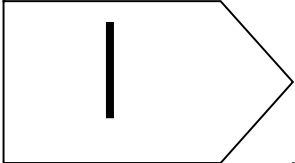
Cuatro formas y dos tamaños (8 bloques)

Tablas de doble entrada


















		
		
		

¿Dónde se coloca el bloque rojo, circular, grueso y pequeño?


















Tablas de doble entrada

		
		?
	?	






















Tablas de doble entrada 1

											
X			X				X			X	
	X				X			X		X	
		X	X				X		X		
	X					X		X	X		
		X		X				X		X	
X					X		X		X		

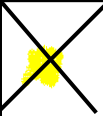



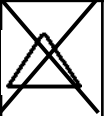
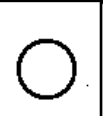

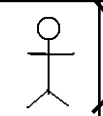















Tablas de doble entrada 2

Tablas de doble entrada 3

														
X	X		X				X			X				
	X			X	X			X		X				
		X	X						X					
	X					X	X							
		X		X										
X					X		X							

Tablas de doble entrada 4

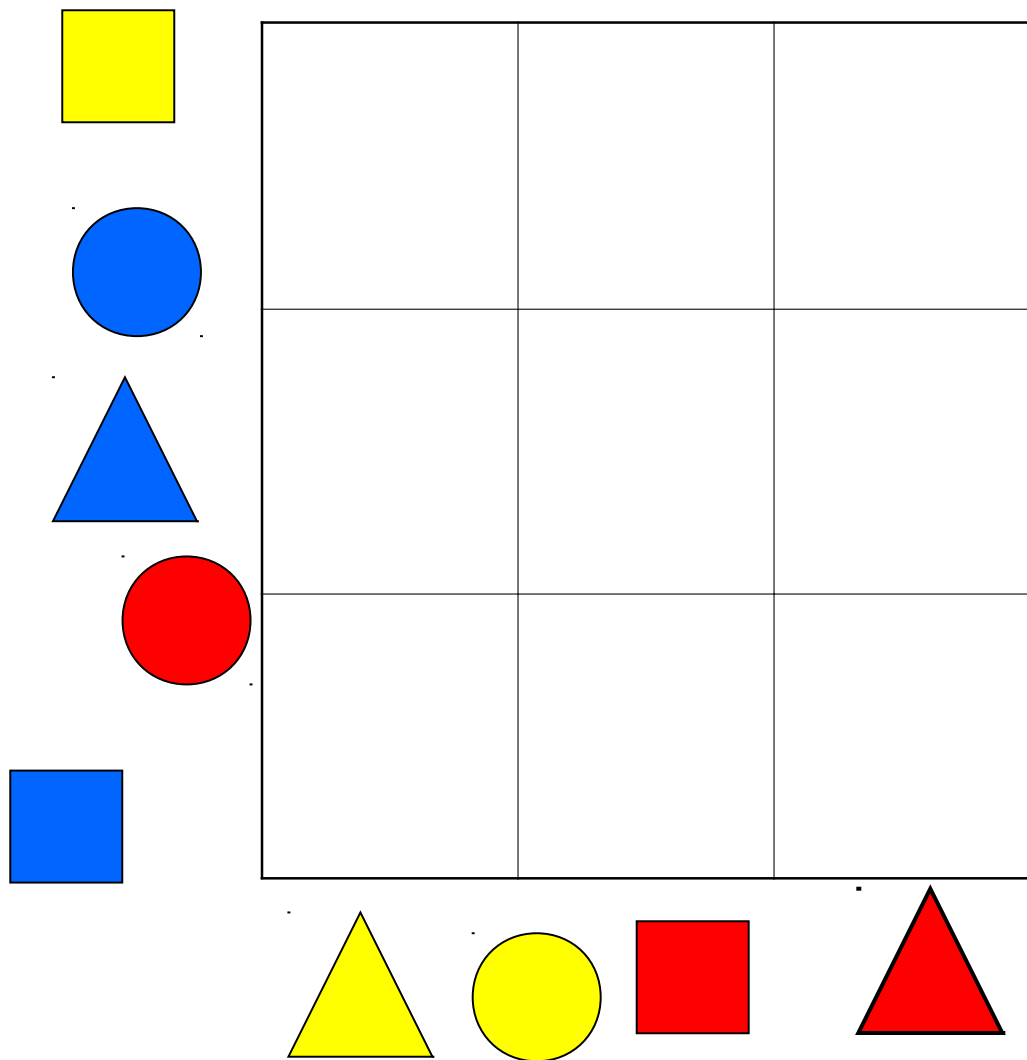
														
		X		X		X	X			X				
X	X			X		X		X	X					
	X		X		X		X							
							X	X			Todos			
		X		X		X	X							
X					X		X							

Tablas de triple entrada

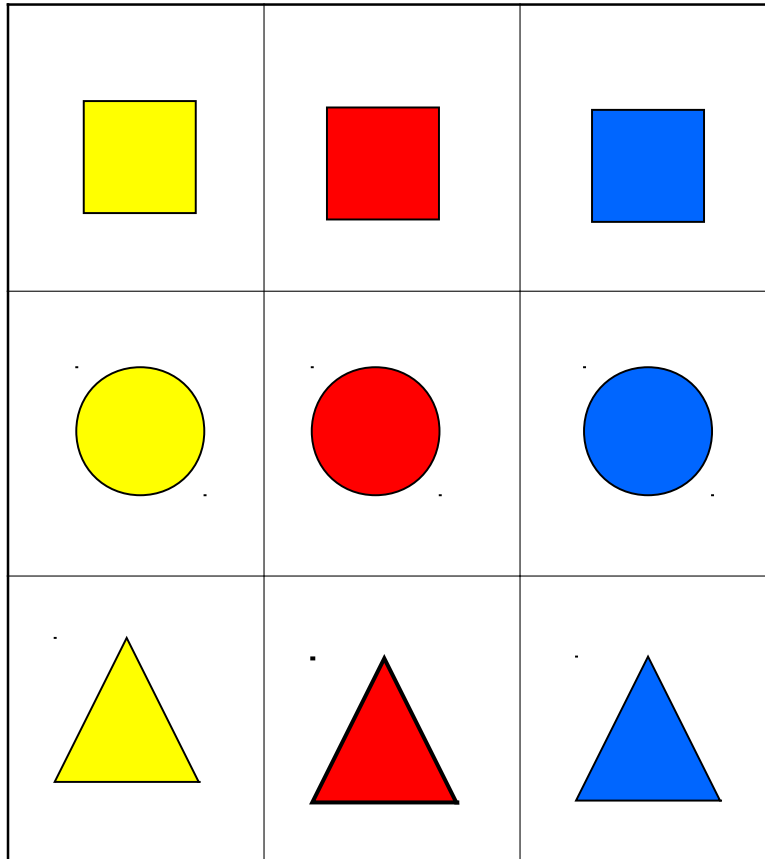
	GRANDE				PEQUEÑO		
	amarillo	azul	rojo		amarillo	azul	rojo
Cuadrado				Cuadrado			
Círculo				Círculo			
Triángulo				Triángulo			
rectángulo				rectángulo			

Ordenar

Colocar ordenadamente bloques en tablas...



... y poner las palabras en el lugar adecuado



Azul

cuadrado

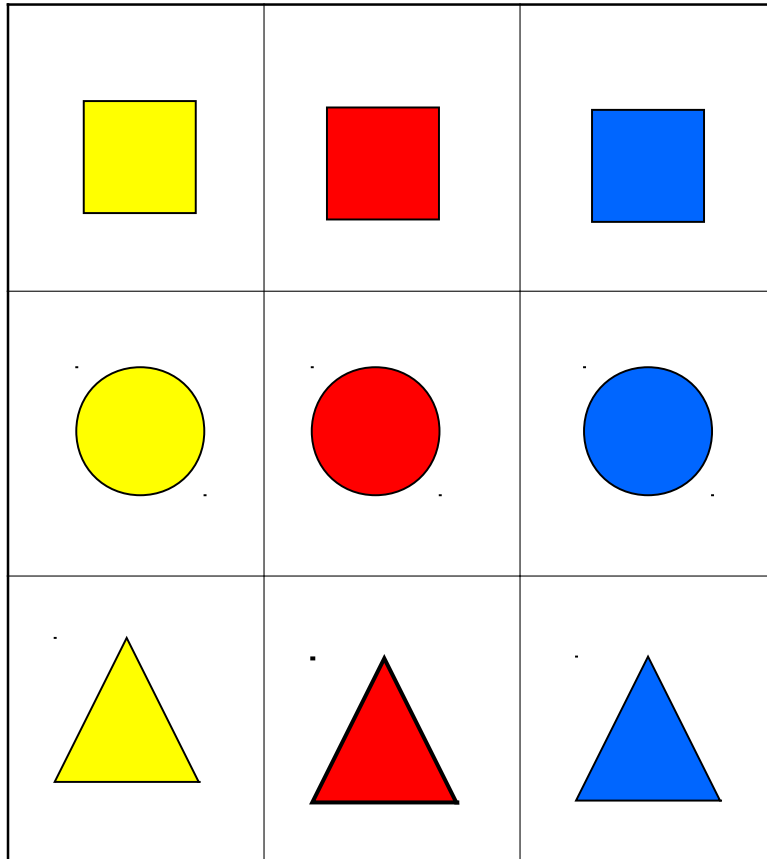
triángulo

círculo

Rojo

Amarillo

... y poner las palabras en el lugar adecuado



cuadrado

círculo

triángulo





Amarillo

Rojo

Azul



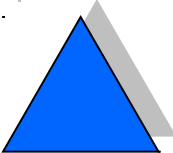

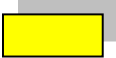
Completar tablas

Con bloques pequeños y delgados

Completar tablas

Con bloques gruesos

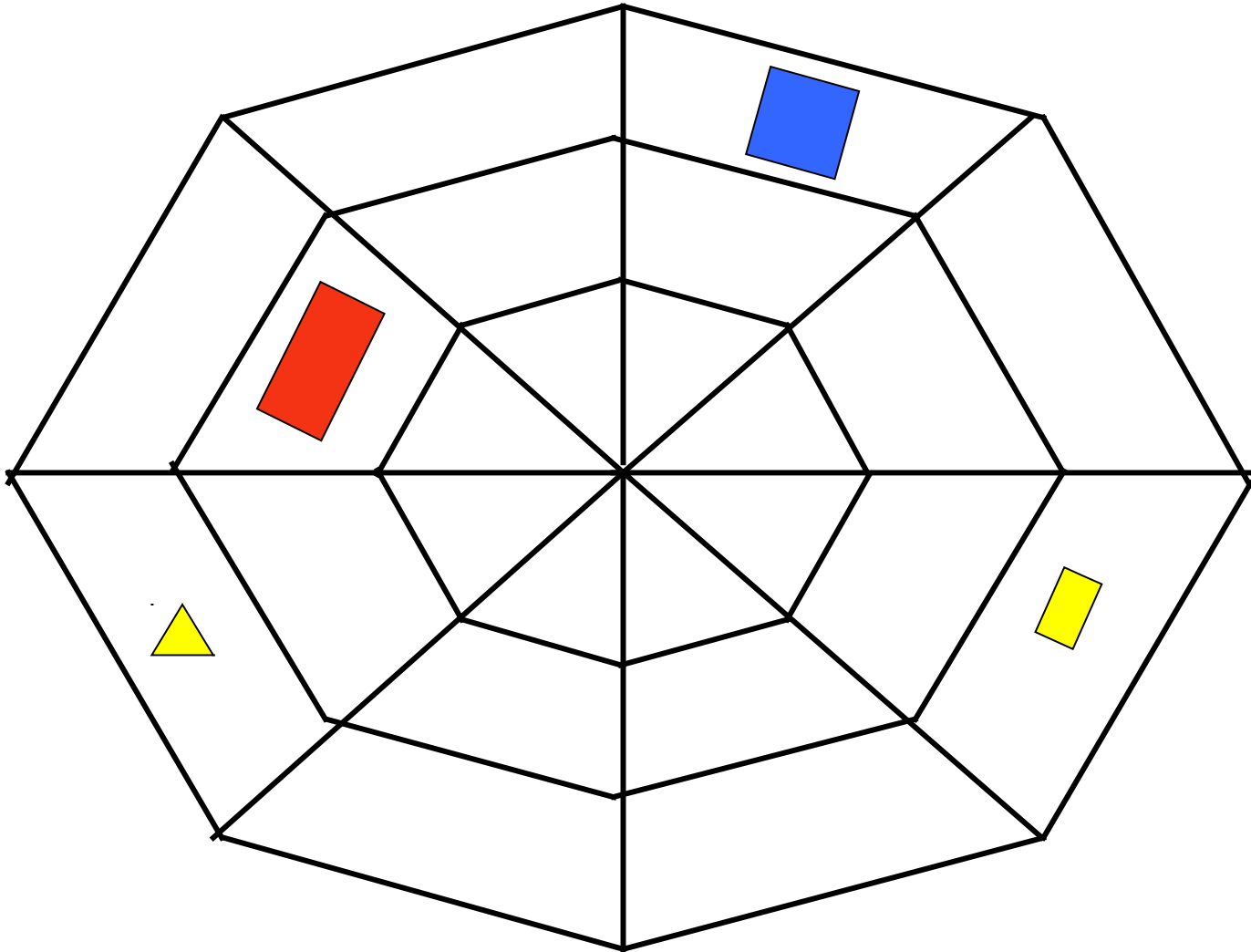
Completar tablas

Cuadrado Amarillo Pequeño delgado	?			
Círculo Amarillo Grande delgado	Círculo Amarillo Grande grueso			
Triángulo Amarillo Grande grueso	Triángulo rojo Grande grueso	Rectángulo Rojo Grande grueso	Rectángulo Azul Grande grueso	Cuadrado Azul Grande grueso

Completar tablas

cuadrado amarillo pequeño delgado				
círculo amarillo grande delgado	círculo amarillo grande grueso	cuadrado amarillo grande grueso	?	
triángulo amarillo grande grueso	triángulo rojo grande grueso	rectángulo rojo grande grueso	rectángulo azul grande grueso	cuadrado azul grande grueso

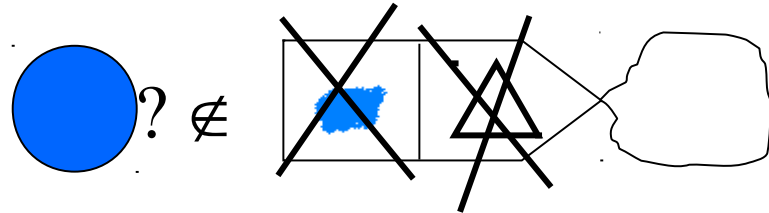
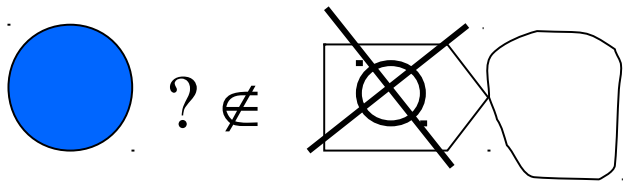
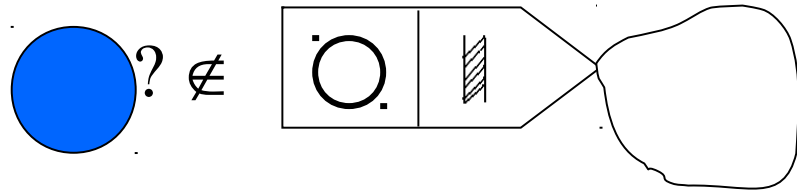
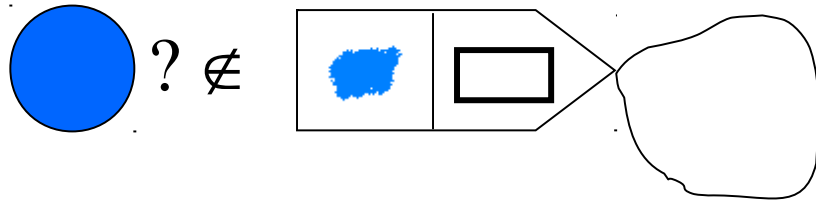
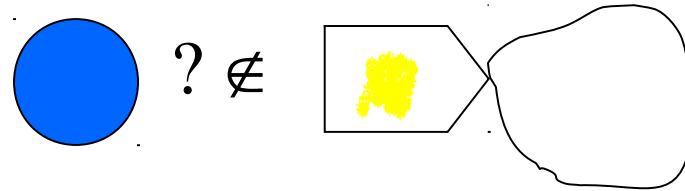
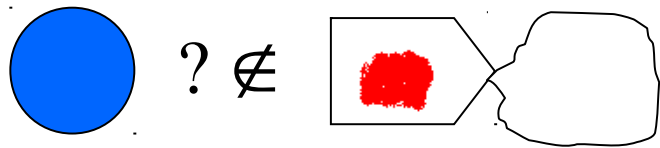
La tela de araña



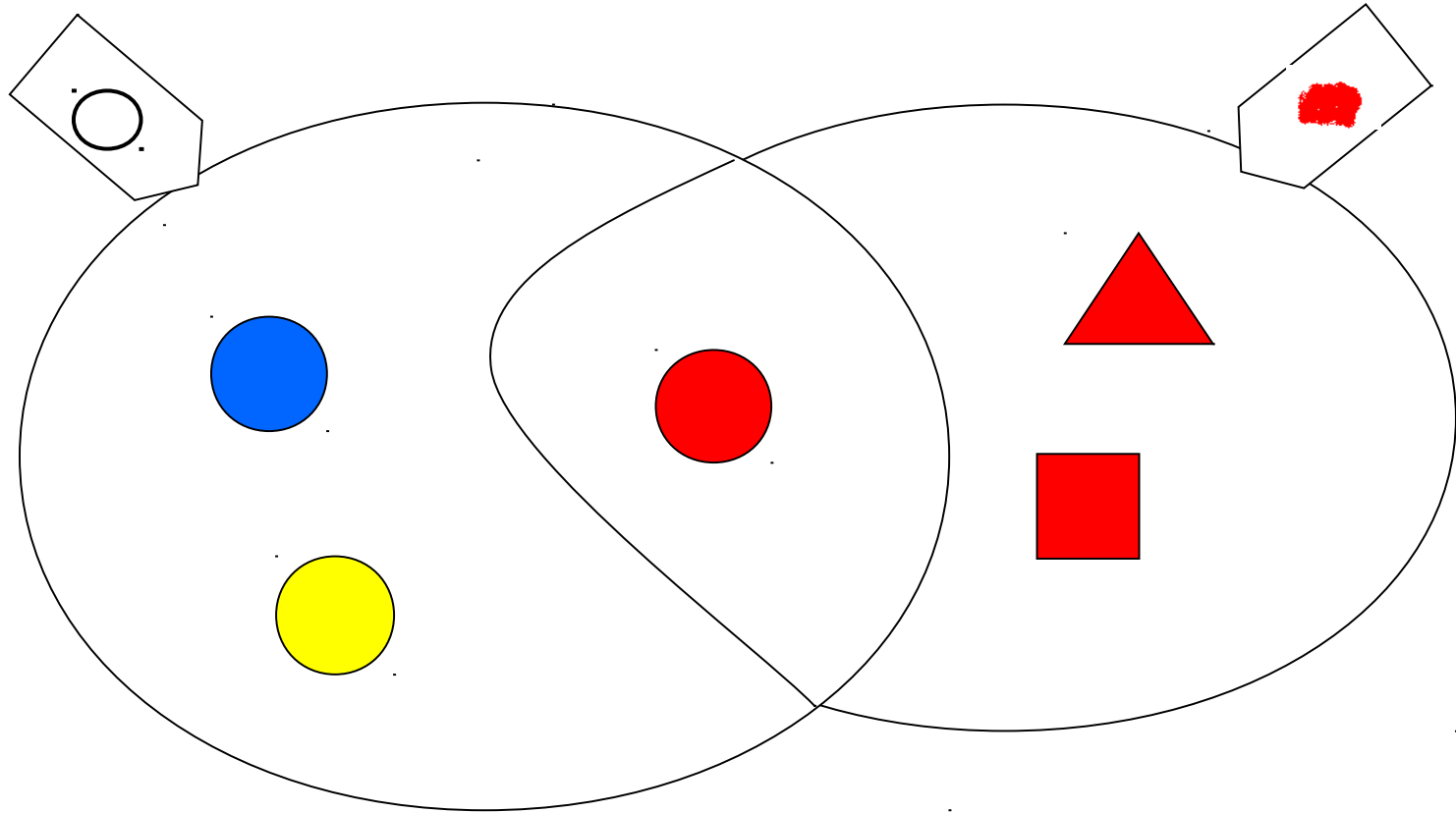
Con un solo grosor

Pertenencia

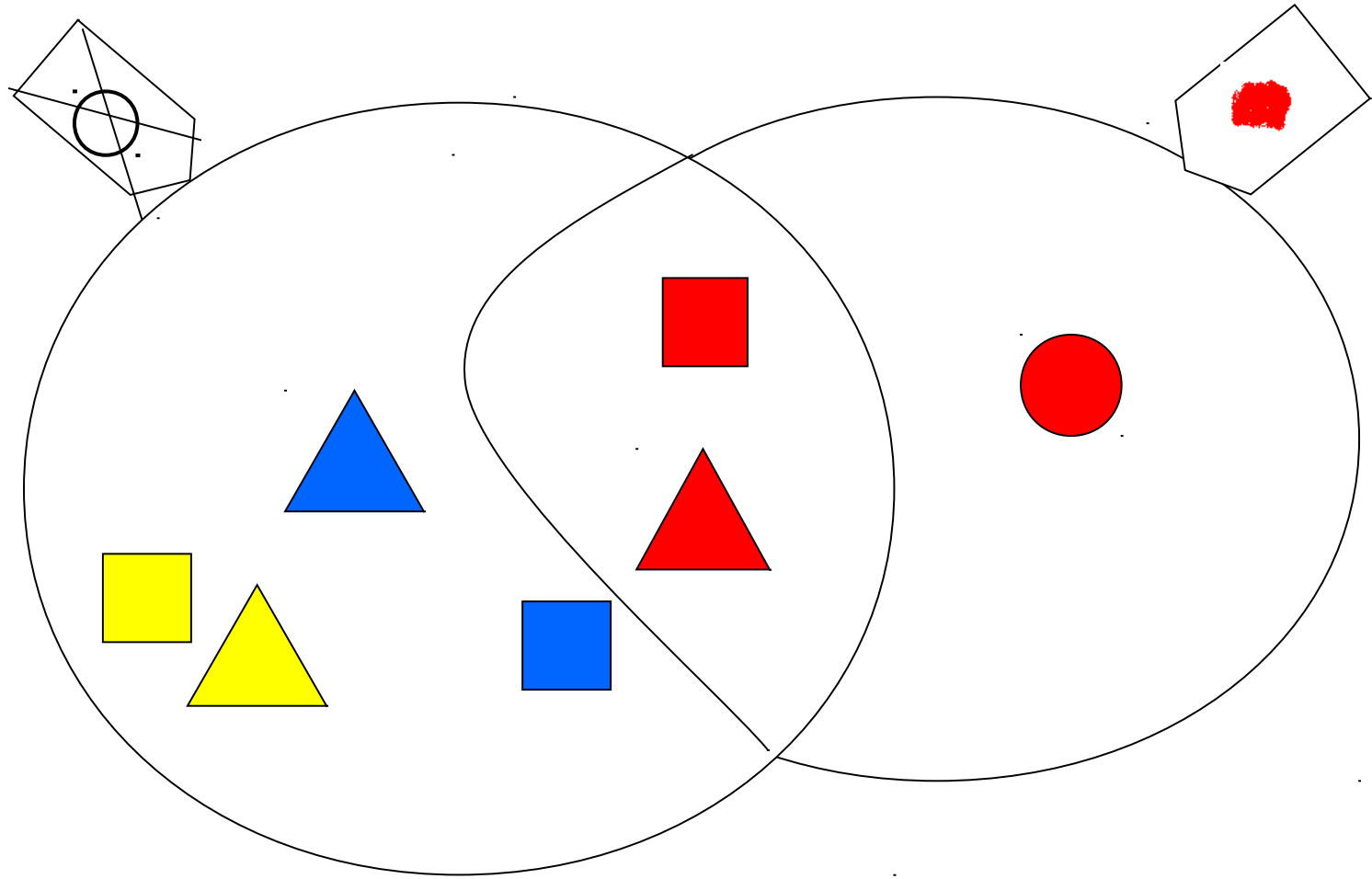
Pertenencia a clases



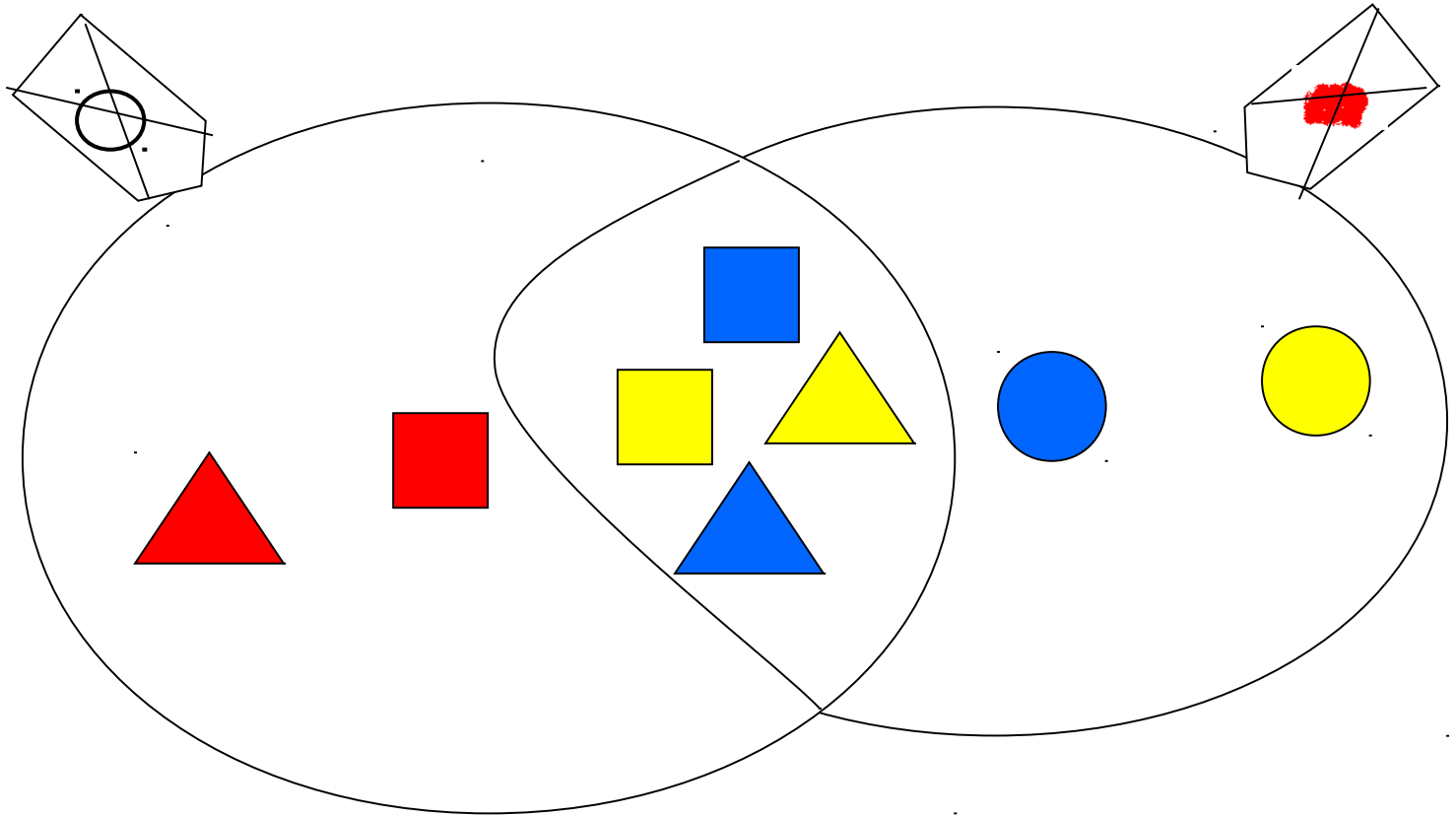
Elementos comunes a dos clases



Elementos comunes a dos clases

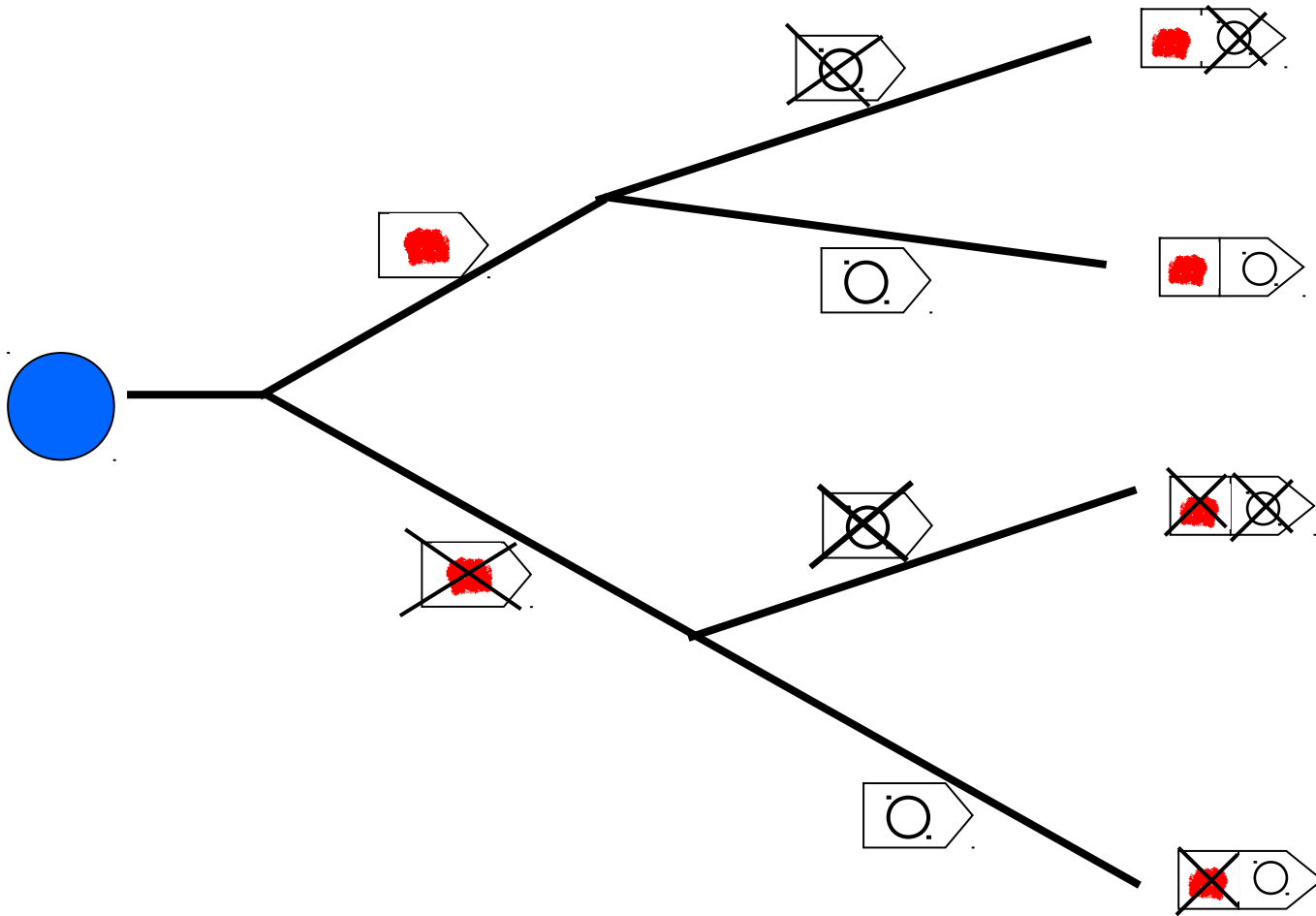


Elementos comunes a dos clases

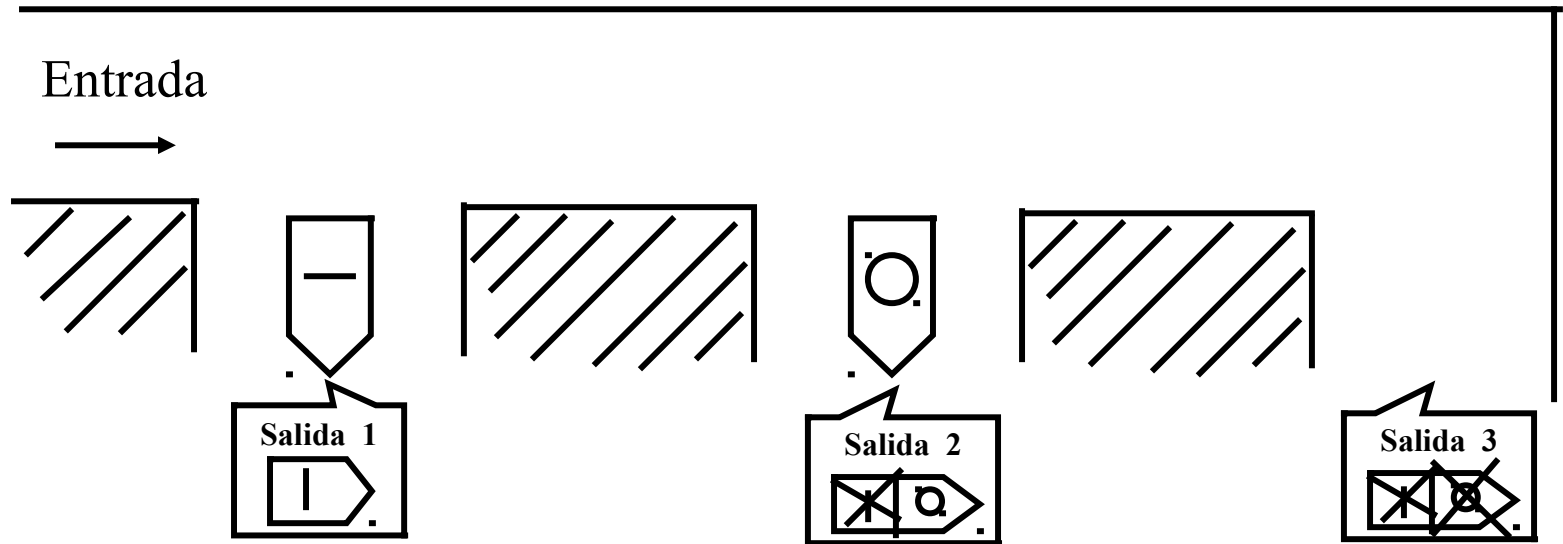
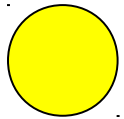


Camminos y árboles

¿Dónde va este bloque?



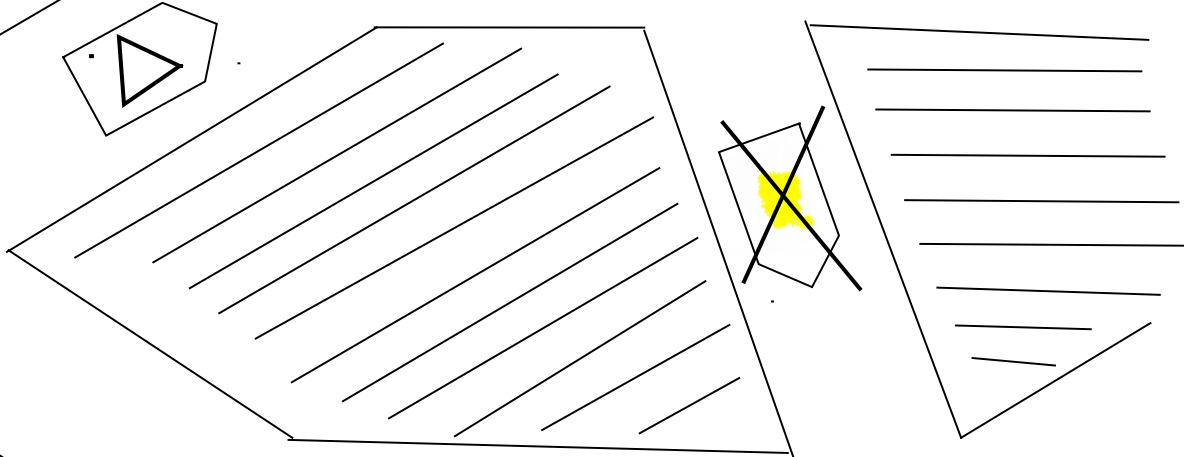
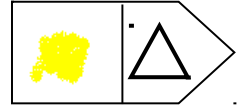
Camminos



Camminos

ENTRADA

¿Cuáles llegan aquí?

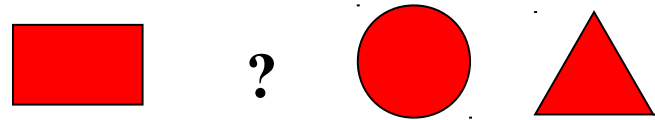


¿Y aquí?

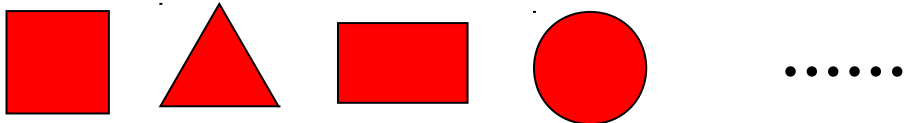
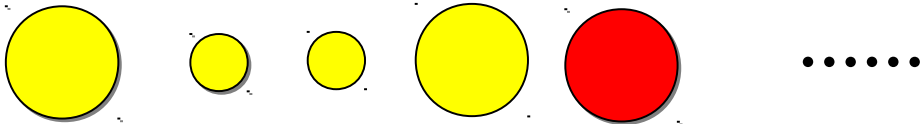




Series

Series

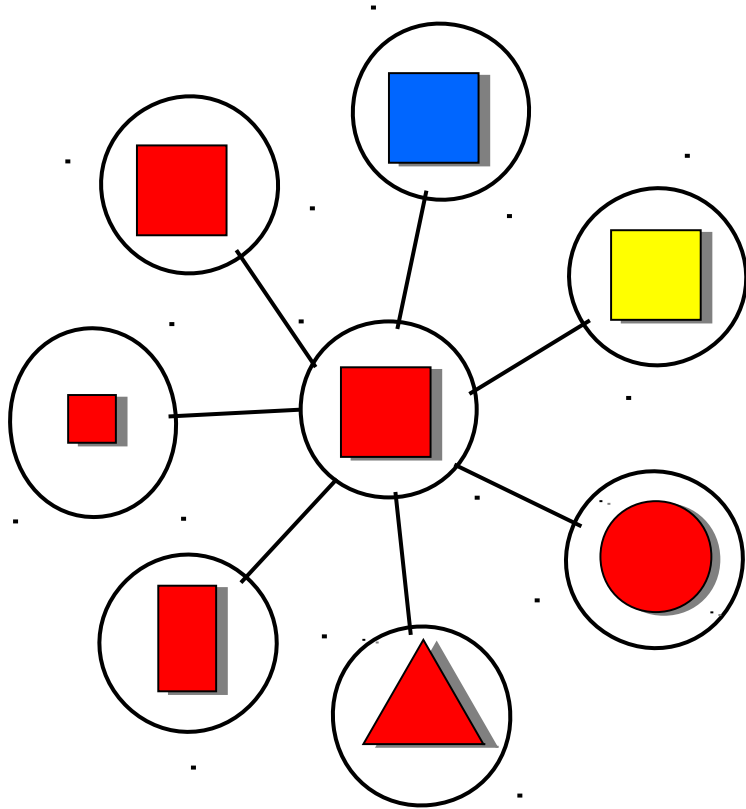


Series (restringidas)

- ▶ Con las rojas 
- ▶ Con los círculos 
- ▶ Con fichas delgadas 
- ▶ Con las pequeñas 

Diferencias

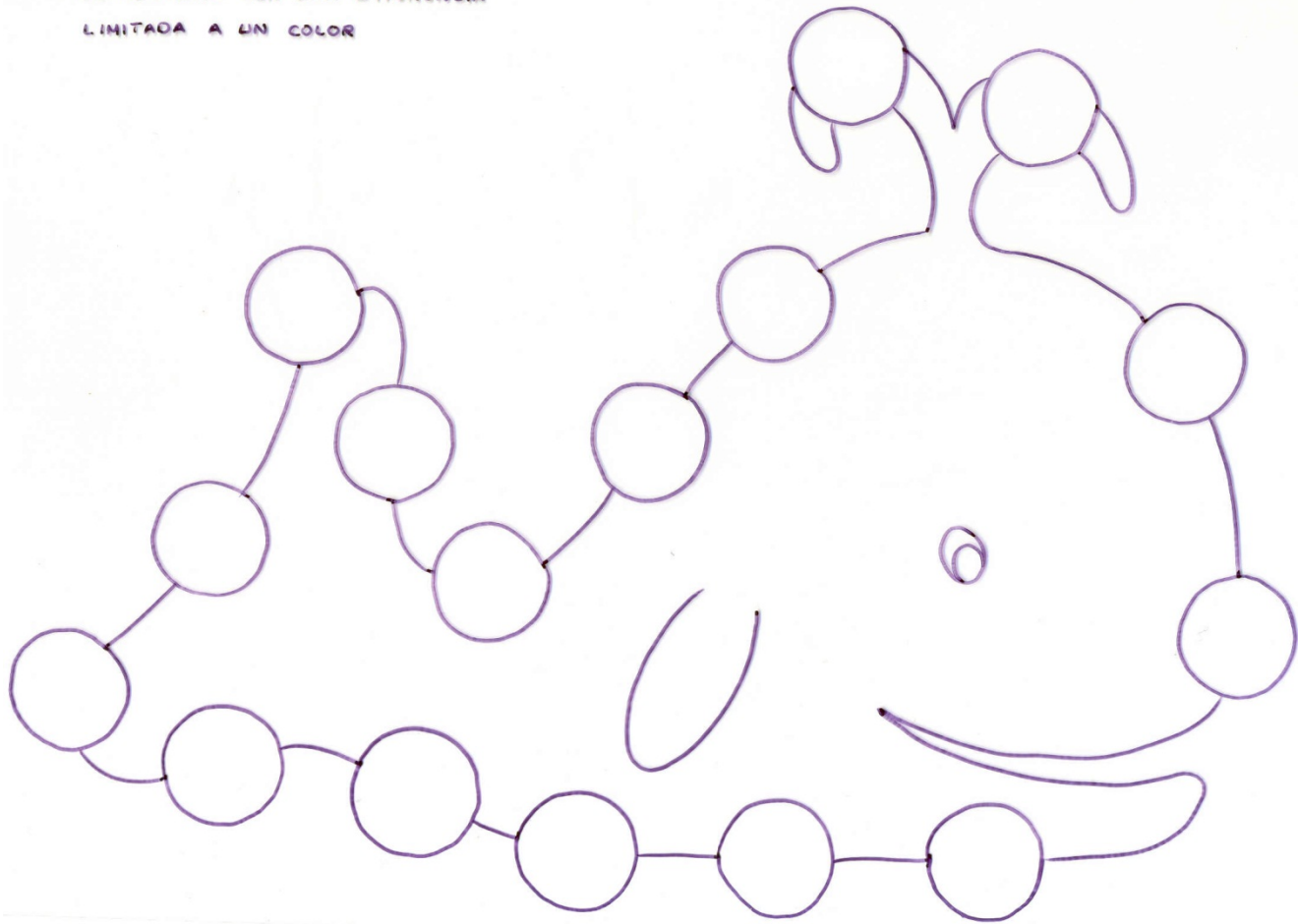
Una diferencia



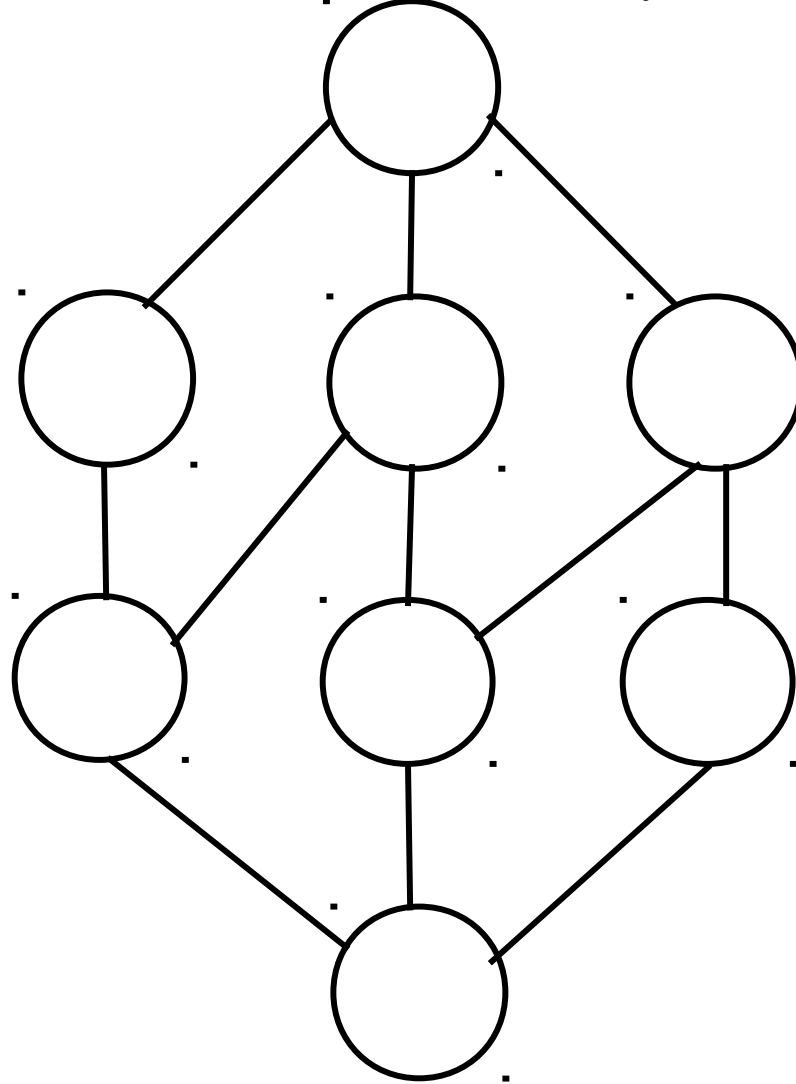
Color	→	2 bloques
Forma	→	3 bloques
Tamaño	→	1 bloque
Grosor	→	1 bloque
		<hr/>
		Total 7

Series con una diferencia

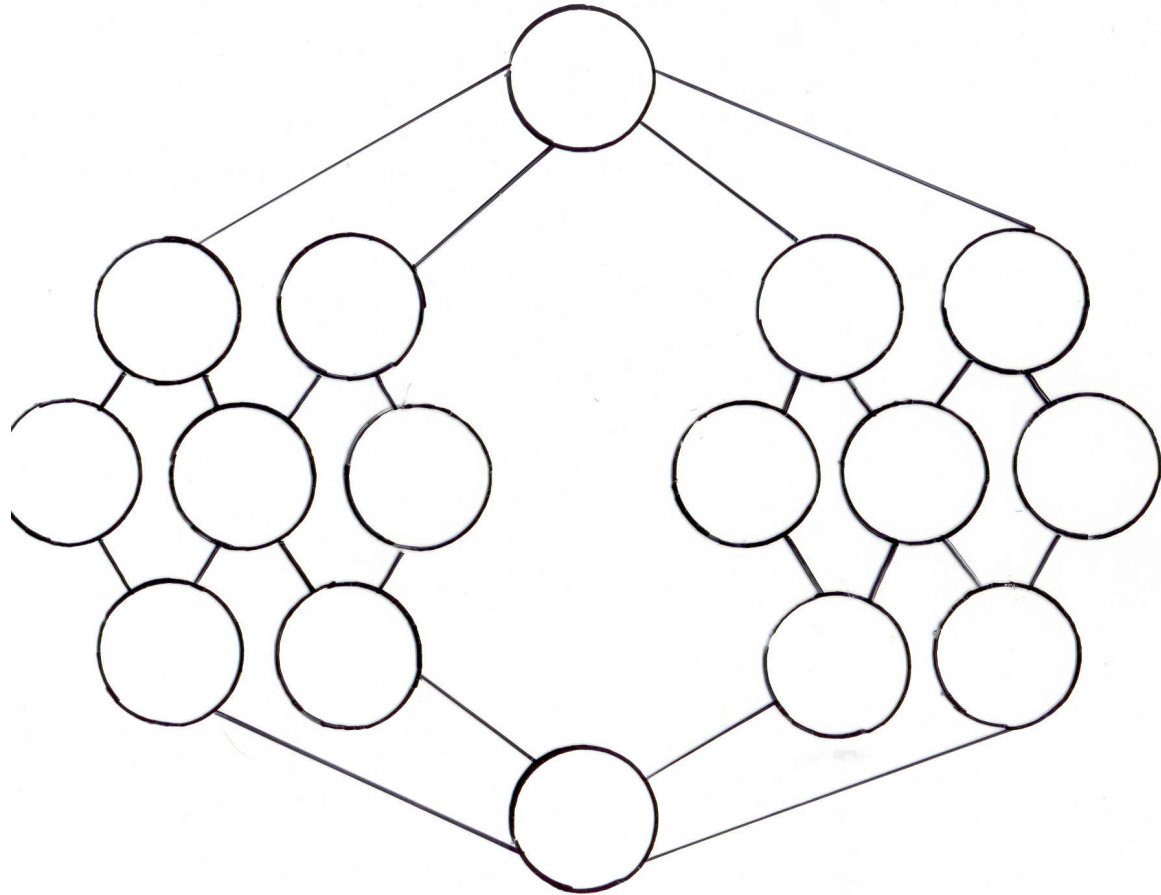
ESTRUCTURA CON UNA DIFERENCIA
LIMITADA A UN COLOR



Series con una diferencia

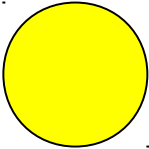
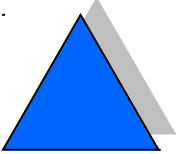
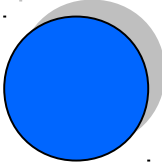
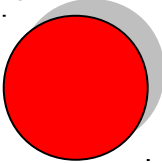
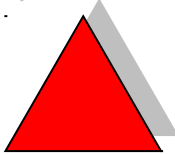







Series con una diferencia

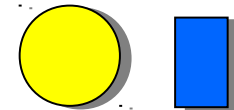
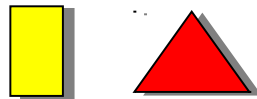
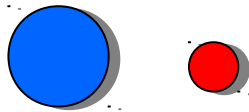
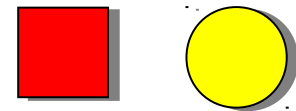
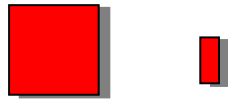


Ordenar bloques en tablas

De forma mixta $\begin{cases} \text{Por filas con una diferencia} \\ \text{Por columnas con dos diferencias} \end{cases}$

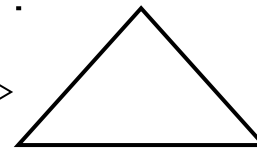
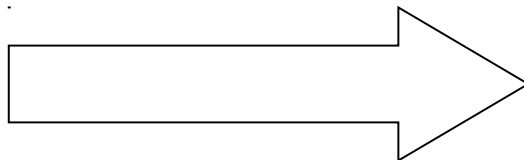
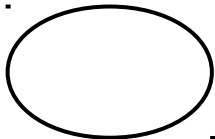
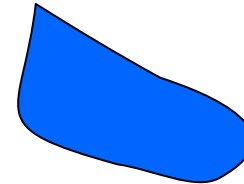
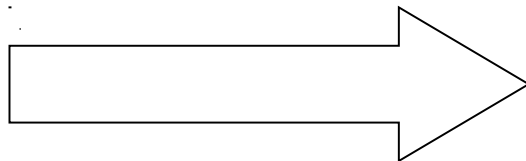
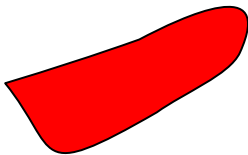
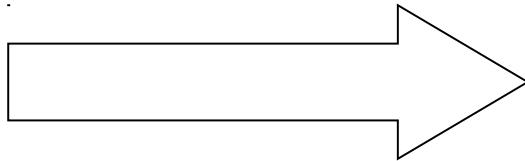
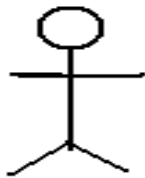
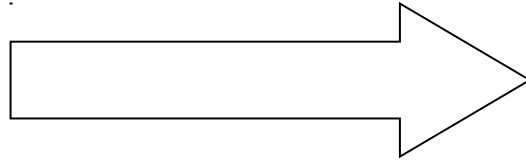
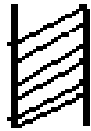
					
					
					
					

¿Qué parejas de bloques se parecen más?

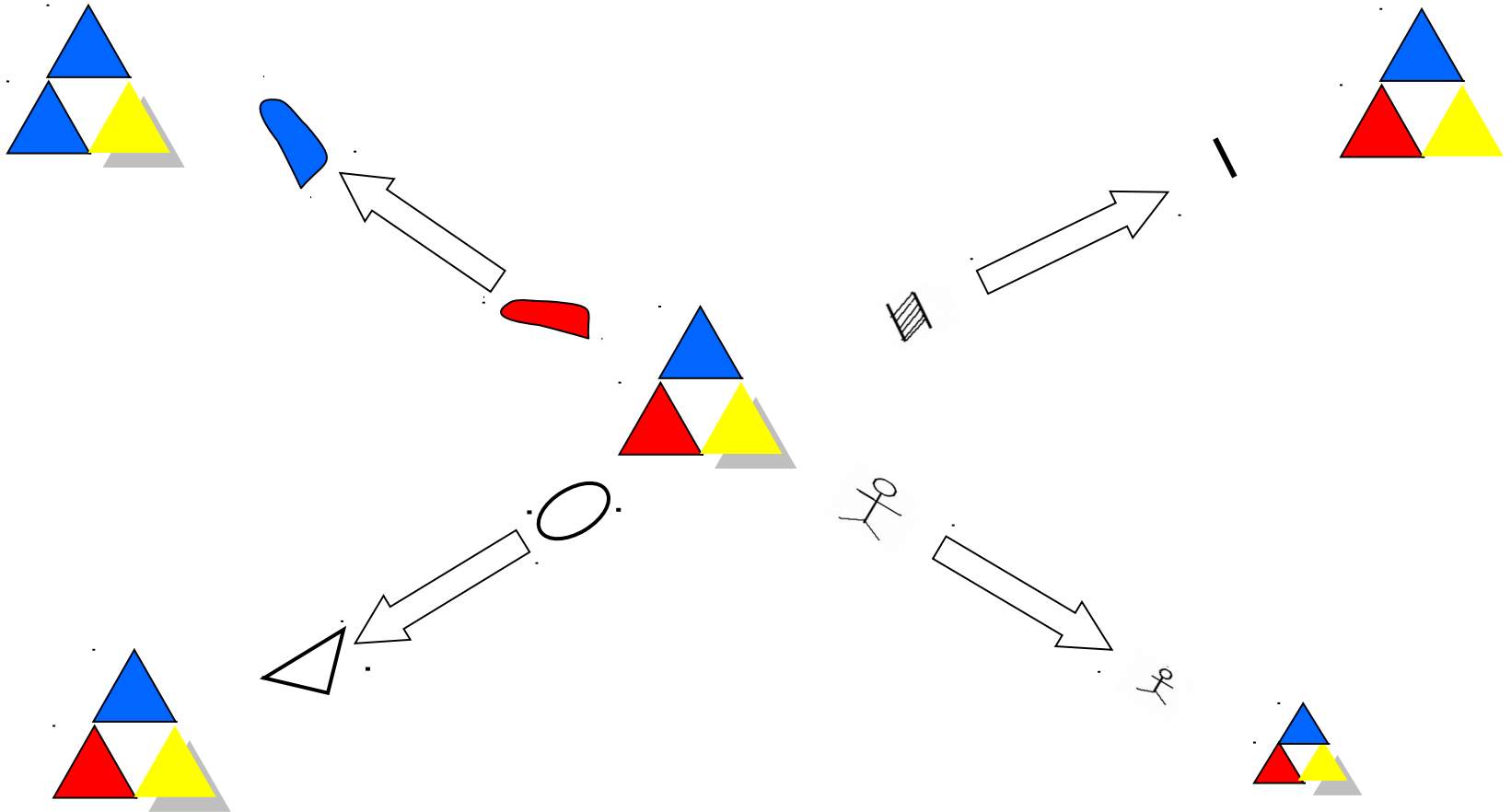


Máquinas de cambio

Máquinas de cambio

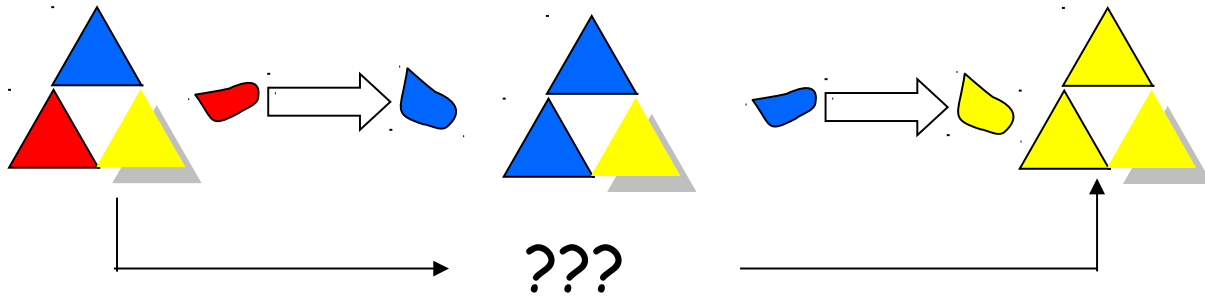


Máquinas de cambio



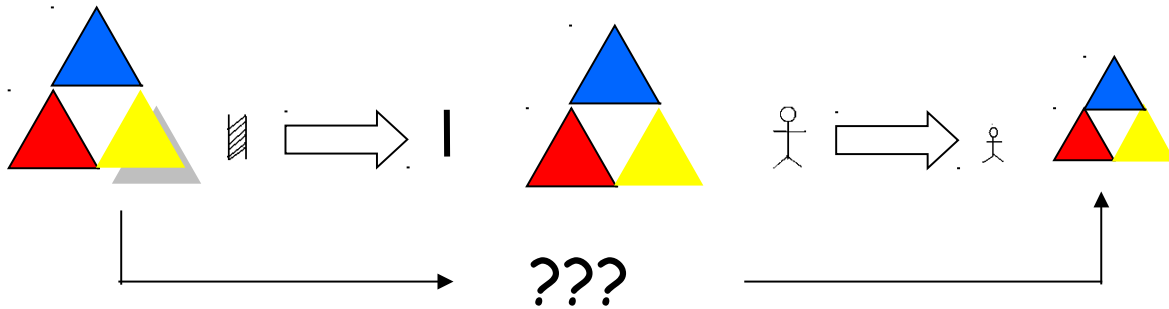
Composición de máquinas

Cambian el mismo atributo (color)



Composición de máquinas

Cambian distinto atributo (grosor y tamaño)



http://clic.xtec.cat/db/act_es.jsp?id=1298