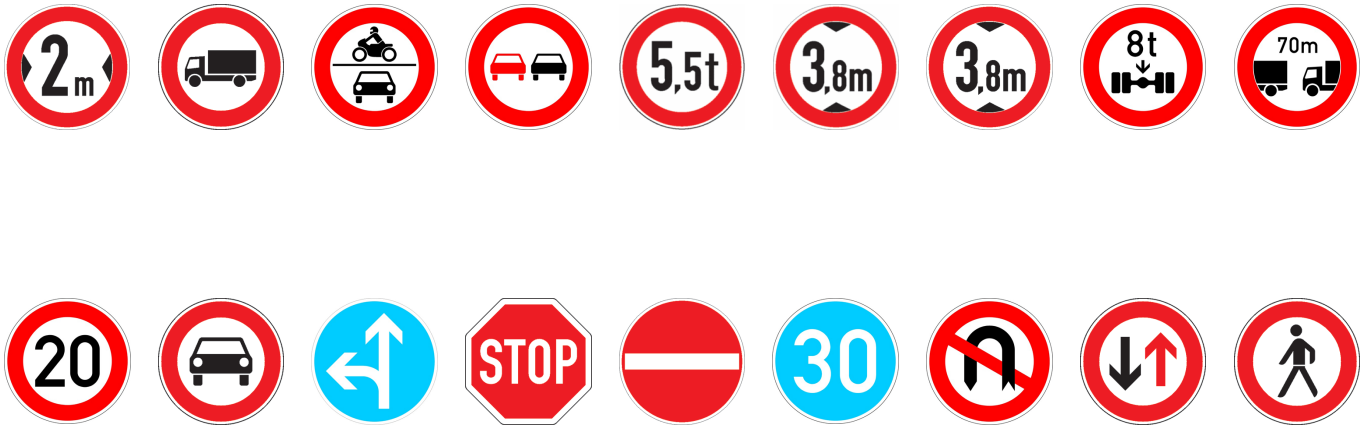
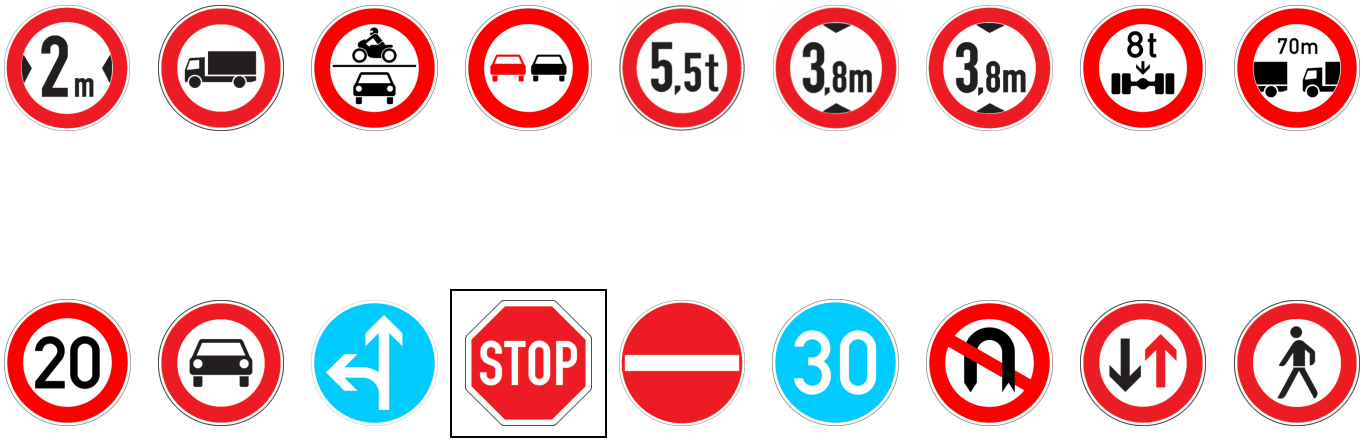
♦ *WORK IT OUT*	**Classify: by elimination** **"Road signs"**	**9-11** **Level 1** **Exercise 1**

Aims	Practise observing a series to determine the points in common and the differences: the observation criteria are: - the shape; - what the message represents.
Applications (examples)	In class: in civic education, it is possible to speak about notions of difference and exclusion; in all subjects, looking for mistakes and their cause. At work: anything related to looking for faults, and installing machines with symbolised controls. In everyday life and for leisure: learn to recognise and identify pictograms in everyday life, on the roads and in public places, tidy cupboards, find unexpected results in all sorts of activities (cooking, for example).
Materials	A series of 18 selected road signs: only one includes written instructions.
Instructions	The pupils will observe and put a cross (or any other sign) under the road sign which they think is different from the others; they must justify their choice.
Comments	The solution given in the answers is not all that easy… experience has shown that many other solutions, sometimes completely unexpected, can be given.
Variations (examples)	The teacher can ask the pupils to cite all the road signs that they can think of. The signs can then be drawn for the group. Each pupil will then have to choose 5 signs, one of which could be considered as an 'odd one out', and will submit his series to the group and to the teacher.
Individualisation	Yes.
Answers	Yes for information only.

WORK IT OUT	**Classify: by elimination** **“Road signs”**	**9-11**



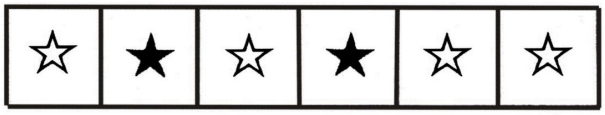
WORK IT OUT	**Classify: by elimination** **“Road signs”**	**9-11** **Answers**

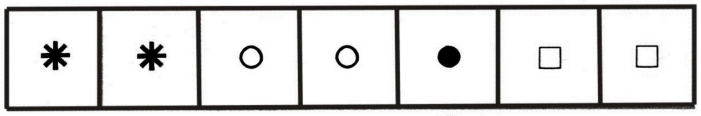


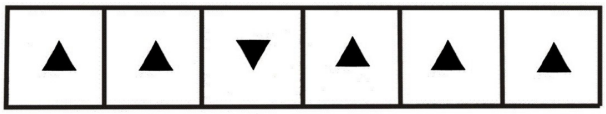
WORK IT OUT	**Classify: by elimination** **"Too many signs"**	**9-12** **Level 1** **Exercise 2**

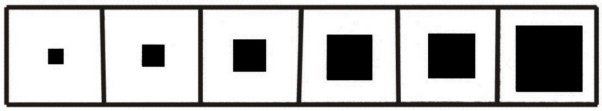
Aims	Practise finding an "odd one out" in an abstract set according to criteria of shape, colour and repetition.
Applications (examples)	In class: in civic education, address the notion of difference and exclusion and, in general, classify documents, situate yourself in a timetable (at school). At work: enter into the logic of a system of representation, find breakdowns and failures. In everyday life and for leisure: tidy one's things, tidy cupboards, book shelves, CD and other collections.
Materials	An exercise sheet with 6 series of signs, independent of each other and numbered.
Instructions	For each series of signs, the pupils must put a cross (or any other sign) under the sign that they think is the odd one out.
Comments	It is preferable to do the exercise in the order in which it is presented (from 1 to 6).
Variations (examples	The pupils can form two groups. Each group will look for a number of objects to show to the other group and to the teacher with an odd one out in the objects. Each group can also choose to draw series of objects or abstract series.
Individualisation	Yes.
Answers	Yes for information only.

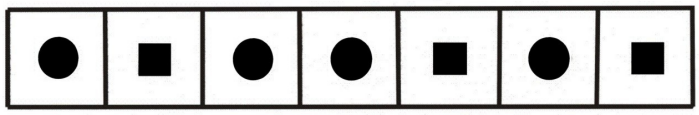
WORK IT OUT	**Classify: by elimination** **“Too many signs”**	**9-12**

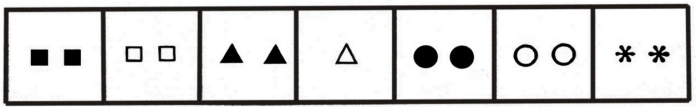
1 

2 

3 

4 

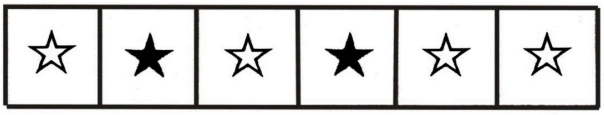
5 

6 

Classify: by elimination

"Too many signs"

1



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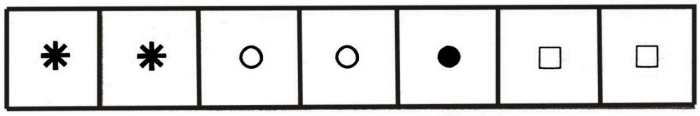

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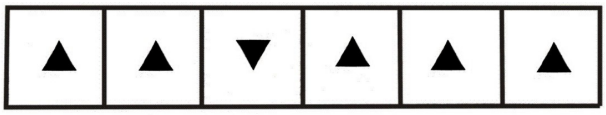

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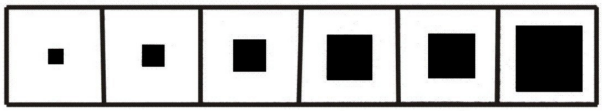

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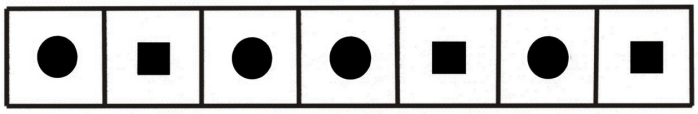

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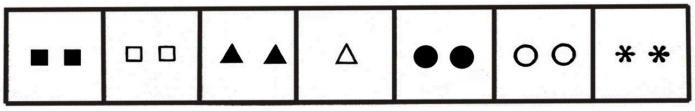


X

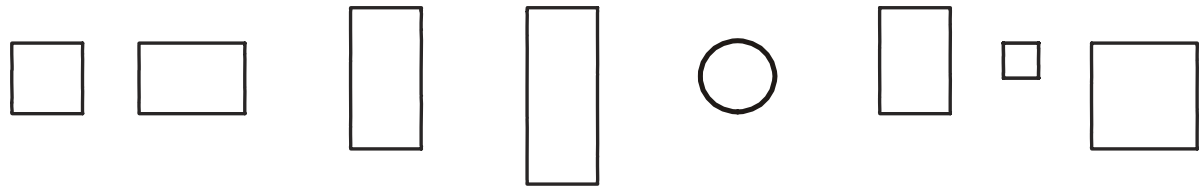
WORK IT OUT	**Classify: by elimination** **"Peculiarities"**	**9-13** **Level 1** **Exercise 3**

Aims	Practise observing, comparing, isolating a difference in an abstract series: - By shape; - By what is missing; - By what is shown but does not match the rest of the series.
Applications (examples)	In class: in civic education, for example, address the notion of difference and exclusion, classify documents, situate yourself in a timetable (at school). At work: enter into the logic of a system of representation, find breakdowns and failures, be on the lookout for innovations. In everyday life and for leisure: tidy one's things, tidy cupboards, book shelves, CD and other collections; find unexpected results in all sorts of activities (cooking, for example).
Materials	An exercise sheet showing ordinary geometric shapes.
Instructions	The pupils will observe and put a cross (or any other sign) under what they think does not correspond to the series.
Comments	The solution given in the answers is not all that easy… experience has shown that many other solutions, sometimes completely unexpected, can be given.
Variations (examples)	The pupils can form two groups. Each group will look for a number of objects to show to the other group and to the teacher with an odd one out in the objects.
Individualisation	Yes.
Answers	Yes for information only.

Classify: by elimination

"Peculiarities"

1.



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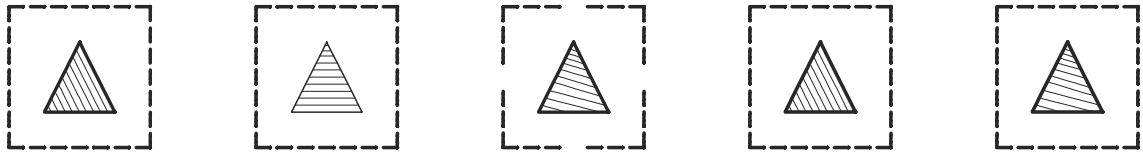

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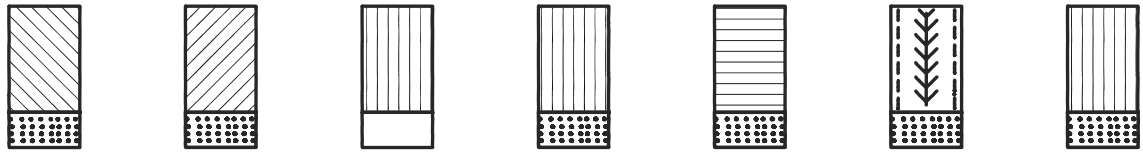
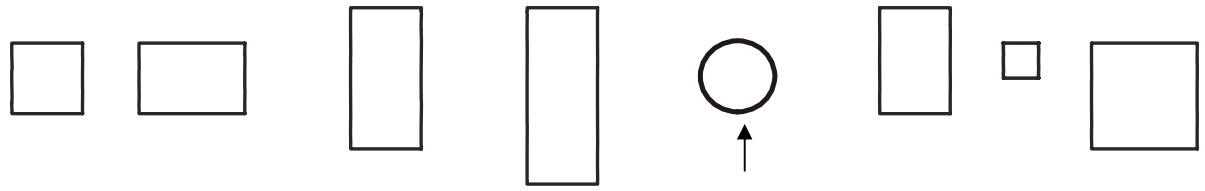


Classify: by elimination

"Peculiarities"

1.



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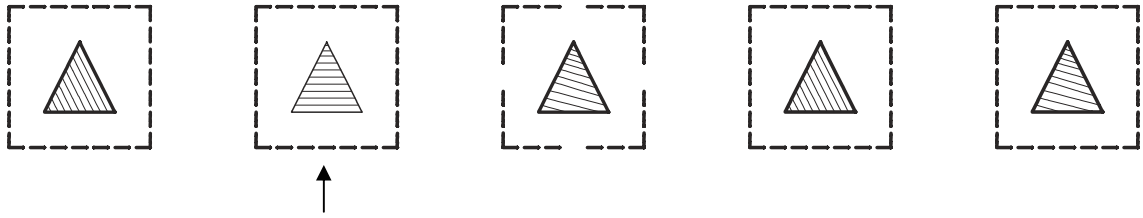

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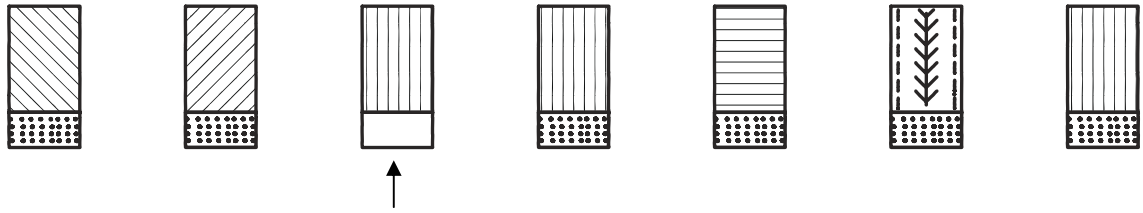


WORK IT OUT	**Classify: by elimination** **"The 14 signs"**	**9-21** **Level 2** **Exercise 1**

Aims	Practise observing a series to determine the points in common and the differences: the observation criteria are: - the colour; - the shape; - the message.
Applications (examples)	In class: Address the notion of difference and exclusion, classify documents, situate yourself in a timetable (at school). At work: Enter into the logic of a system of representation, find breakdowns and failures, innovations. In everyday life and for leisure: Recognise common everyday pictograms, tidy one's things, tidy cupboards, bookshelves, CD and other collections; find unexpected results in all sorts of activities (cooking, for example).
Materials	A series of 14 signs in various forms.
Instructions	The pupils will look at the page and put a cross (or any other sign) under the sign which they consider to be different from the others; they must justify their choice very clearly.
Comments	It is a good idea to have the pupils comment on some of the signs, with each one trying to find what they might mean.
Variations (examples)	The teacher can ask the pupils to draw a sign that they have made up, the other pupils then have to guess the meaning of the sign. All the made up signs will be shown and the group can then try to draw up a classification system and look for one or more odd ones out.
Individualisation	Yes.
Answers	Yes for information only.

WORK IT OUT	**Classify: by elimination** **"The 14 signs"**	**9-21**

WORK IT OUT	**Classify: by elimination** **"The 14 signs"**	**9-21** **Answers**

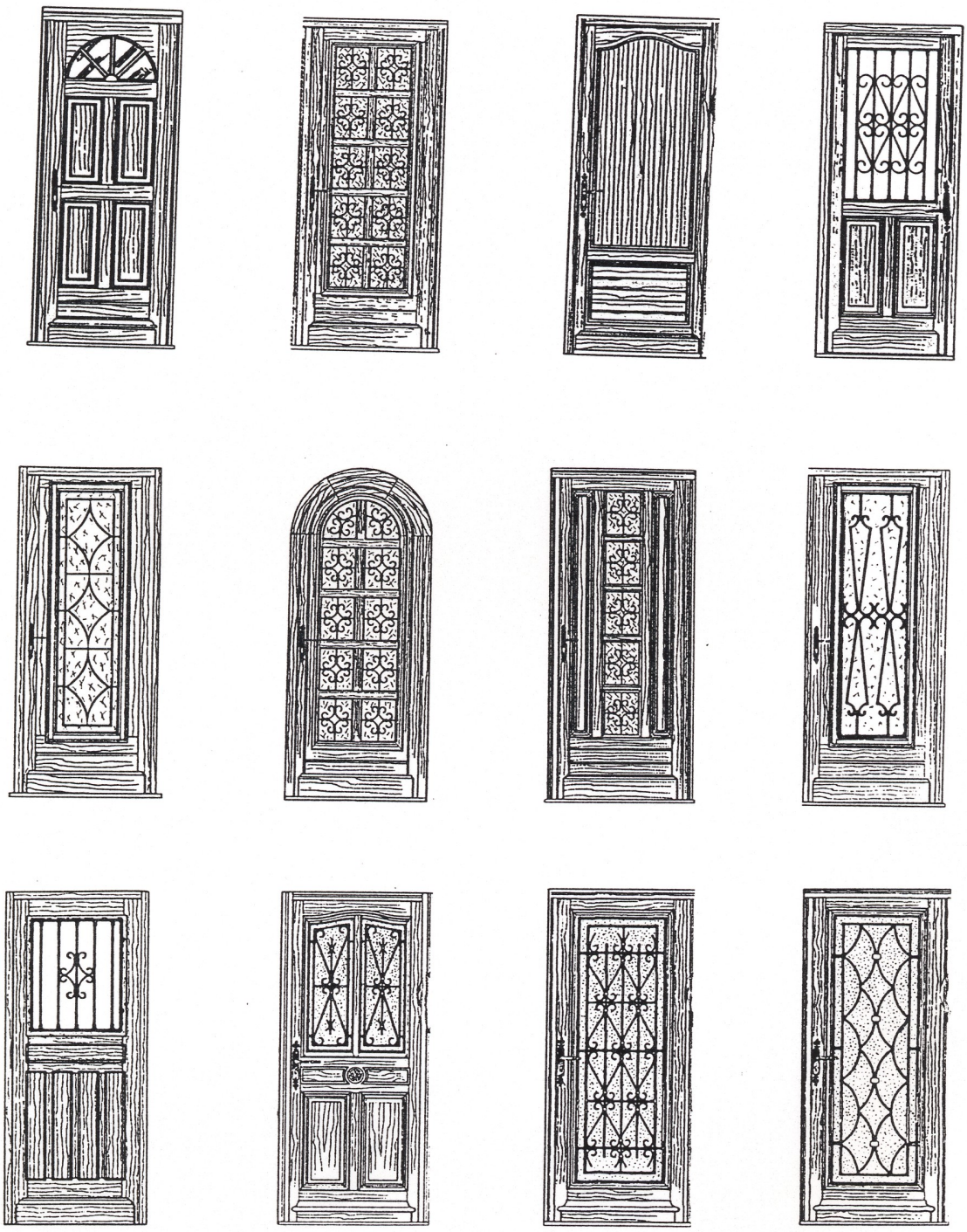
X

WORK IT OUT	**Classify: by elimination** **"The Doors"**	**9-22** **Level 2** **Exercise 2**

Aims	- Practise observing a series to determine the similarities and differences; - Practise defining a basis to designate an odd one out, the only one that does not correspond to this choice.
Applications (examples)	In class: Look at the notion of difference and exclusion, file documents, situate yourself in a timetable (at school), assess results. At work: Enter into the logic of a system of representations, find breakdowns and failures, innovations. In everyday life and for leisure: organise your affairs, tidy cupboards, bookshelves, CD and other collections, find unexpected results in all sorts of activities (cooking, for example, or doing the housework).
Materials	A series of 12 different types of front door.
Instructions	The pupils will look at the page and put a cross (or any other sign) under the door that they think seems different from the others; they will then justify their choice by explaining what is common to all the other doors.
Comments	The sheer number of doors can be off-putting for some groups. If this is the case, the teacher can decide to remove the last row of doors. Sometimes certain pupils take the aesthetic aspect of the doors as the selection criterion (this one is the prettiest or the least pretty). The group could then take a few moments to ask each other about their tastes and about the subjective nature of such a basis for choice. The pupils can also work from the answers to try to work out why the third door was chosen.
Variations (examples)	The pupils can choose 3 doors from the series of 12, one of which is an odd one out. The other pupils must decide which one and say what criterion is common to the other two doors.
Individualisation	Yes.
Answers	Yes for information only. This answer has been chosen because all the other doors have glass in them. There are many other possible solutions, for example the door with an arch.

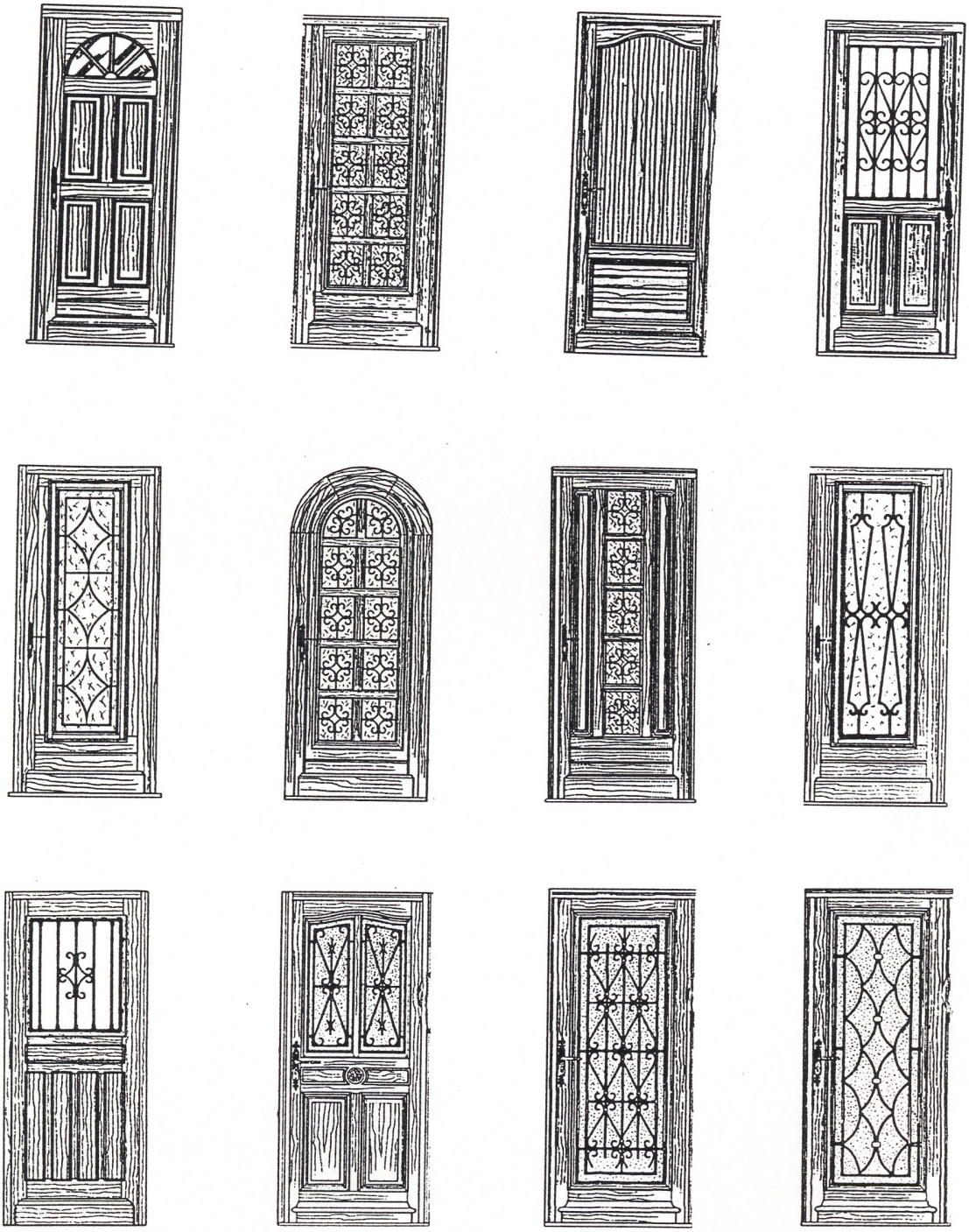
Classify: by elimination

"The Doors"



WORK IT OUT	**Classify: by elimination** **"The Doors"**	**9-22** **Answers**

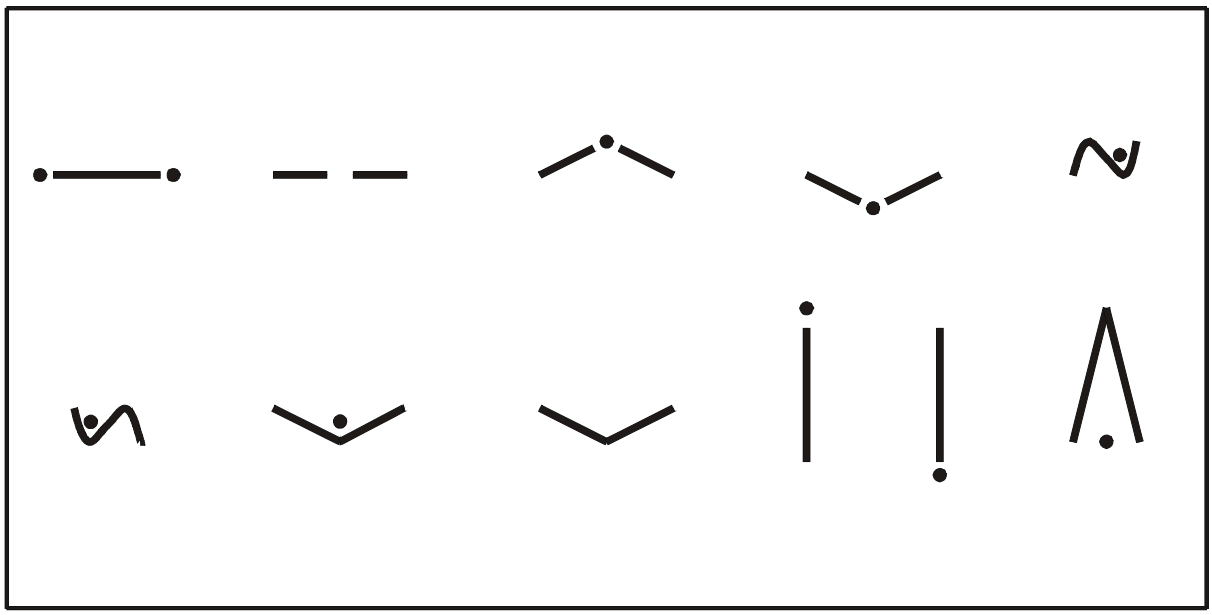
X

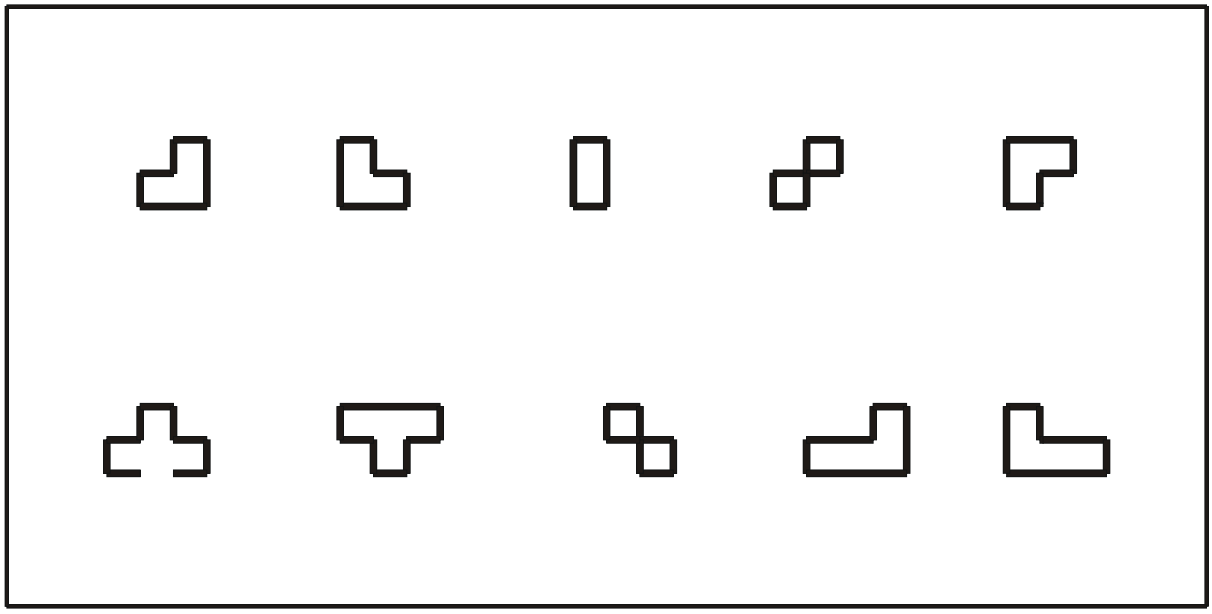


WORK IT OUT	**Classify: by elimination** **"Shapes"**	**9-23** **Level 2** **Exercise 3**

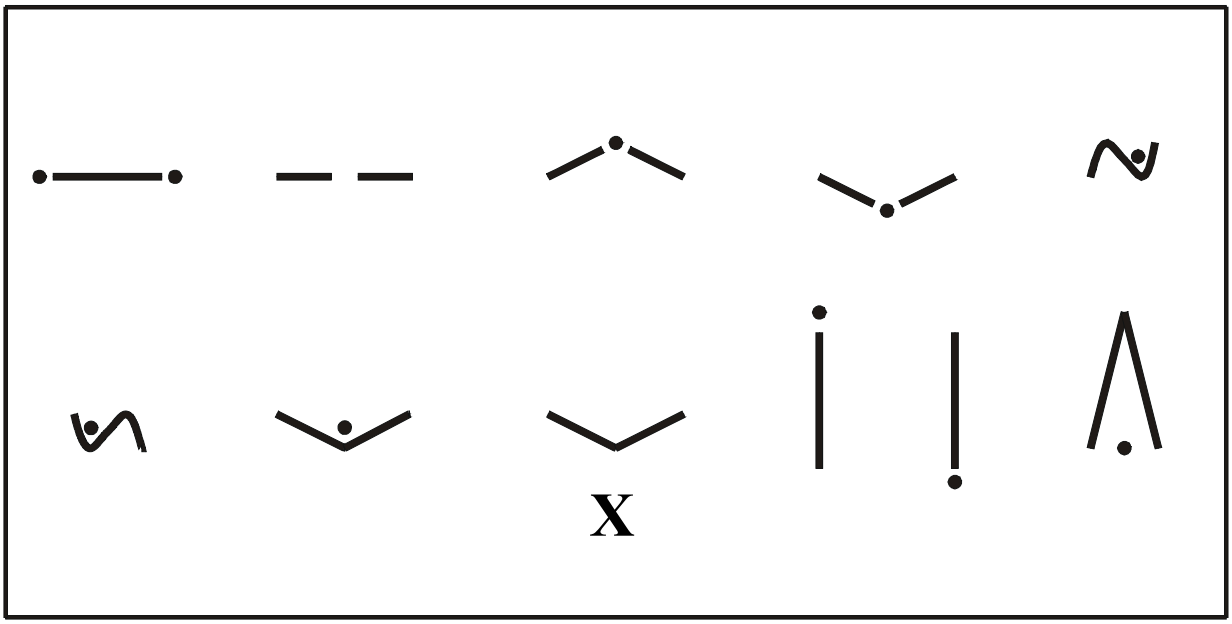
Aims	Practise observing, comparing, identifying an odd shape in a series: - by its shape; - by something missing; - by what is shown but does not form part of the series given.
Applications (examples)	In class: Address the notion of difference and exclusion, classify documents, situate yourself in a timetable (at school), assess results. At work: Enter into the logic of a system of representation, find breakdowns and failures, innovations. In everyday life and for leisure: organise your affairs, tidy cupboards, bookshelves, CD and other collections, find unexpected results in all sorts of activities (cooking, for example, or doing the housework).
Materials	An exercise sheet showing standard or odd geometrical shapes.
Instructions	The pupils will put a cross (or any other sign) under the shape that they think does not correspond to the series.
Comments	The solutions given in the answers are not all that easy… experience has shown that many other solutions, sometimes completely unexpected, can be given.
Variations (examples)	The pupils can form two groups. Each group can agree on ten or so abstract shapes to draw and to show to the other group and the teacher, each series of shapes including an odd one out.
Individualisation	Yes.
Answers	Yes for information only.

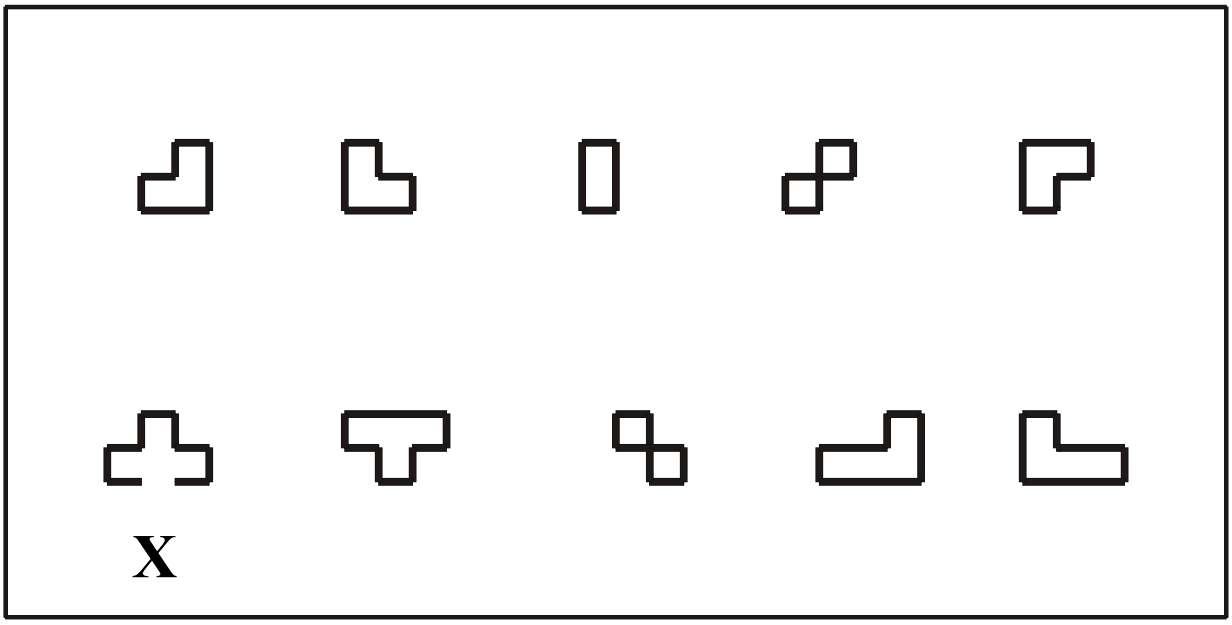
WORK IT OUT	**Classify: by elimination** **“Shapes”**	**9-23**





WORK IT OUT	**Classify: by elimination** **"Shapes"**	**9-23** **Answers**

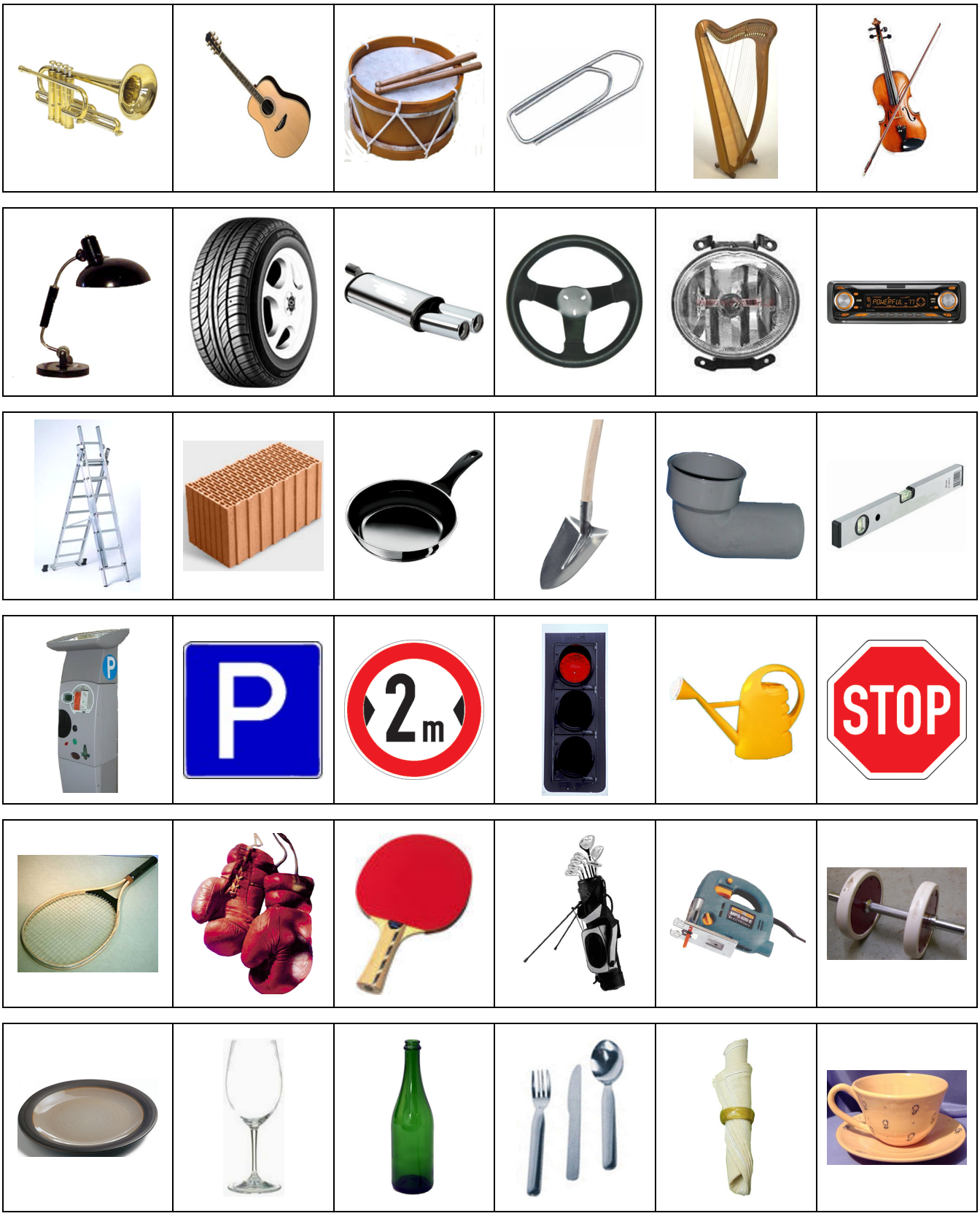




WORK IT OUT	**Classify: by elimination** **"One too many"**	**9-31** **Level 3** **Exercise 1**

Aims	- Practise comparing elements in a series; - Practise finding a common factor; - Practise finding the odd one out.
Applications (examples)	In class: look at the notion of difference and exclusion, file documents, situate yourself in a timetable (in school), assess results. At work: Enter into the logic of a system of representations, find breakdowns and failures, innovations. In everyday life and for leisure: organise your affairs, tidy cupboards, bookshelves, CD and other collections, find unexpected results in all sorts of activities (cooking, for example, or doing the housework).
Materials	An exercise sheet with 6 independent series each made up of 6 pictures.
Instructions	The teacher will make sure that all the pupils know or recognise each picture. The pupils will put a cross (or any other sign) under the picture in each series which does not seem to correspond to the criterion that they have defined beforehand.
Comments	The teacher can use the first series of the 6 as an example: in principle, the common factor in all the pictures bar one is music; the odd one out is therefore the paper clip, if this common criterion is used.
Variations (examples)	The teacher can suggest that the pupils take each vertical column and find a common factor and an odd one out. A lot of imagination is required to find criteria of shape, materials, colour, use, place, context, user or words (letters within words), etc. The pupils can choose 4 drawings out of the 36 with an odd one out. The other pupils have to find the odd picture and say what factor the other pupils have in common.
Individualisation	Yes.
Answers	Yes for information only.

WORK IT OUT	**Classify: by elimination** **“One too many”**	**9-31**



WORK IT OUT	**Classify: by elimination** **“One too many”**	**9-31** **Answers**

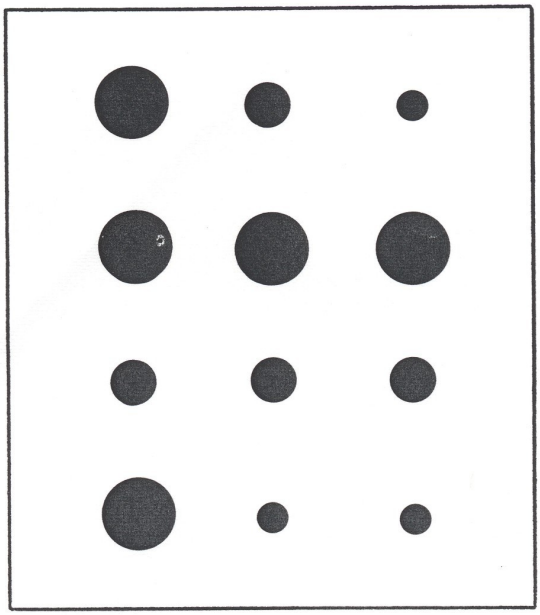
			x		
x					
		x			
			x		
				x	
				x	

WORK IT OUT	**Classify: by elimination** **"Stars and circles"**	**9-32** **Level 3** **Exercise 2**

Aims	Practise visually comparing, without manipulation, to find a logical system and an odd one out.
Applications (examples)	In class: look at the notion of difference and exclusion, file documents, situate yourself in a timetable (in school), assess results, look for solutions, or convergences. Introduction to structuralism. Learn to look at words with a critical eye. At work: File, organise, look for breakdowns, dysfunctions, innovations. Look for solutions. In everyday life and for leisure: Create categories to organise your affairs, find unexpected results, for example when cooking or doing housework.
Materials	An exercise sheet with 2 independent exercises: Exercise 1: - 1 pastille in each size - 3 large pastilles - 3 medium sized pastilles - 1 medium sized and 2 small pastilles Exercise 2: The first line makes up a stock of signs (circles or stars, black or white)
Instructions	The pupils will put a cross (or any other sign) under la pastille which does not belong in the series: 1. either when it takes the place of another one 2. or when the wrong one is superfluous
Comments	It often happens that pupils suggest unexpected solutions, as many are possible. The teacher should insist on the diversity of solutions for this type of exercise, or solicit more answers if the pupils have not found at least 3 different solutions fore each exercise.
Variations (examples)	The pupils might wonder which one could be the odd one out if they consider the two exercises as one and therefore if they consider the pastilles in the two sets (in which case the solution could be the medium sized white star as it appears only once).
Individualisation	Yes.
Answers	Yes, but unfortunately for information only (many answers possible).

WORK IT OUT	**Classify: by elimination** **"Stars and circles"**	**9-32**

1



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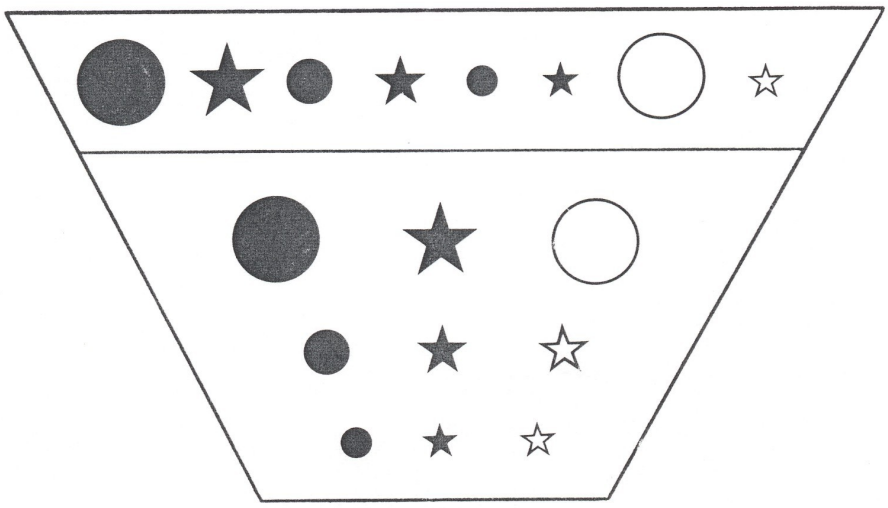
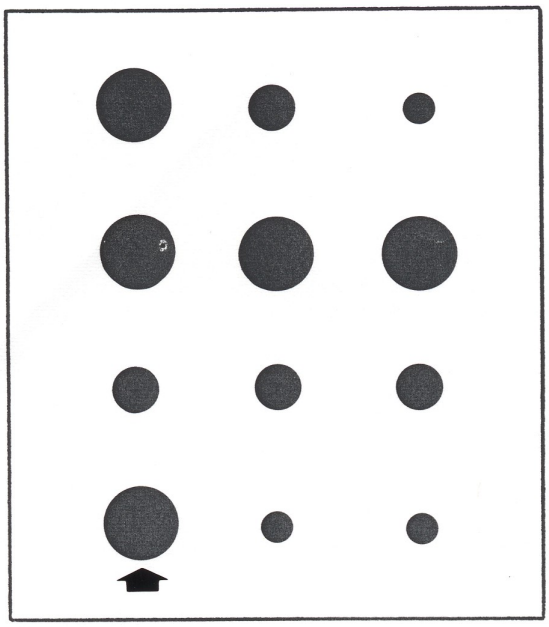


Classify: by elimination

"Stars and circles"

1



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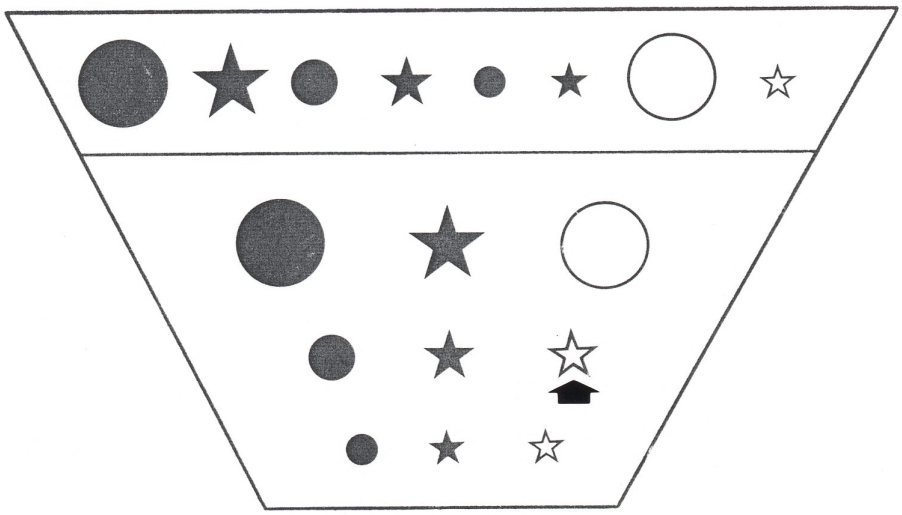


WORK IT OUT	**Classify: by elimination** **"Groups"**	**9-33** **Level 3** **Exercise 3**

Aims	Practise making up groups using criteria that have to be defined, and so as to be able to introduce an odd element in each group.
Applications (examples)	In class: look at the notion of difference and exclusion, file documents, look for solutions, convergences. Introduction to structuralism. At work: File, organise, look for breakdowns, dysfunctions, innovations. Look for solutions, change your mind according to the dictates of the situation. In everyday life and for leisure: Create categories to organise your affairs, cupboards, books and records. Change categories.
Materials	An exercise sheet with a series of shapes each bearing a reference number.
Instructions	From the series of shapes given, the pupils must make 3 groups of 4 shapes, each group having an odd one out. Each shape can only be used once and the pupils will use the numbers associated with the shapes to represent their groups. They must circle the odd one out and be able to justify their choice and their criteria for grouping shapes together.
Comments	After having the group find the task to be done, the teacher must make sure that each pupil has understood it completely, as it is somewhat complex. It will no doubt be necessary to reformulate it several times.
Variations (examples)	The pupils can form two groups. Each group will look for a certain number of objects to show the other group and the teacher with two or three sets or groups to make from the objects, and, for each set, an odd one out to find. Each group can also choose to draw series of objects or abstract series.
Individualisation	Yes.
Answers	Yes for information only.

Classify: by elimination

"Groups"

1 ▼

2 φ

3 ○

4 ●

5 υ

6 △

7 ❁

8 ✪

9 ▽

10 ★

11 ✶

12 ▲

Classify: by elimination

"Groups"

Here is one possible solution among many others:

The white geometric shapes: 3 – 6 – 9
with no. 5 as the odd one out.

The black geometric shapes: 1 – 4 – 12
with no.7 as the odd one out.

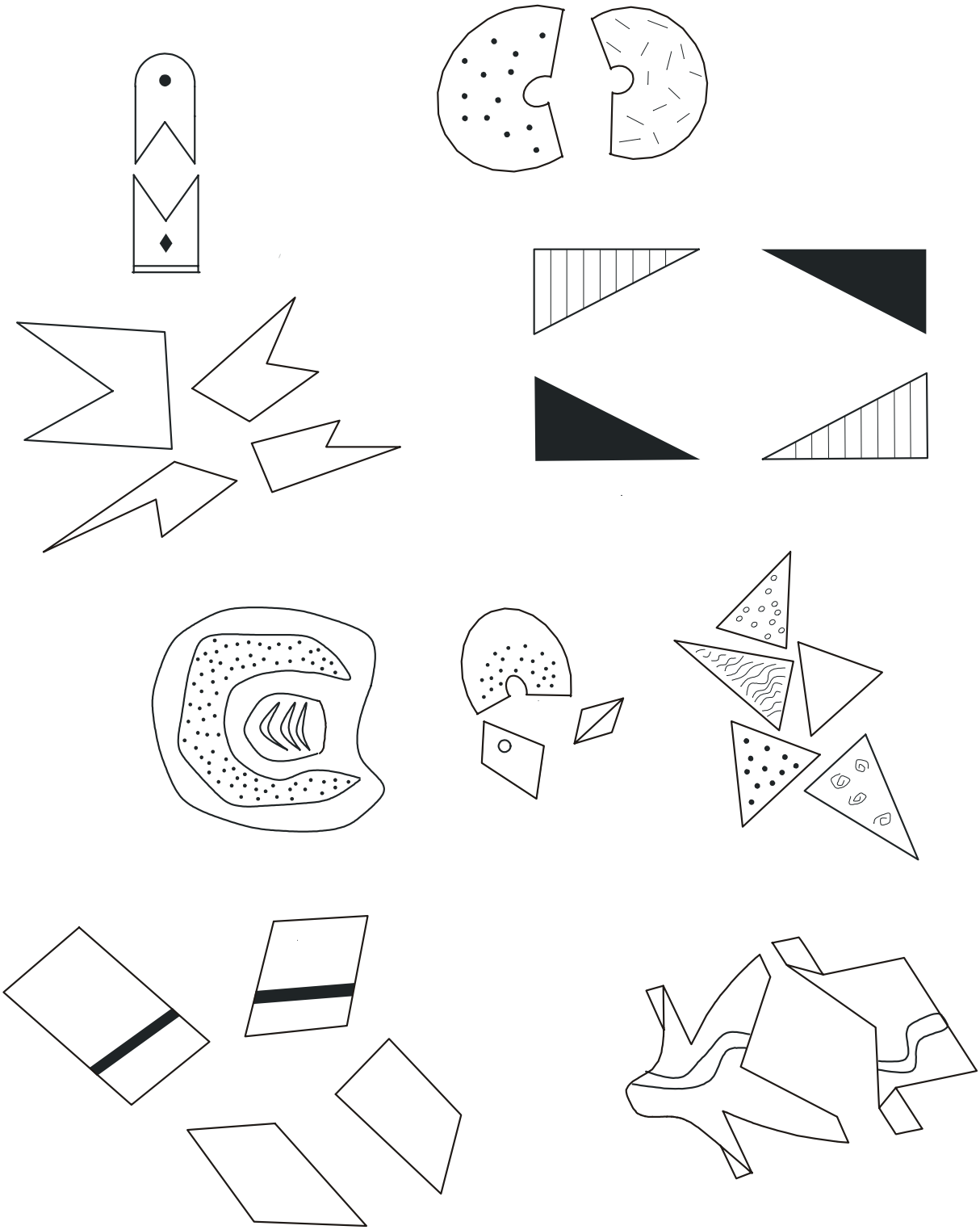
The 5-pointed stars: 2-8-10
with no 11 as the odd one out.

3	○	1	▼	2	φ
6	△	4	●	8	✪
9	▽	12	▲	10	★
5	υ	7	❁	11	✶

WORK IT OUT	**Classify: by elimination** **"Shapes"**	**9-41** **Level 4** **Exercise 1**

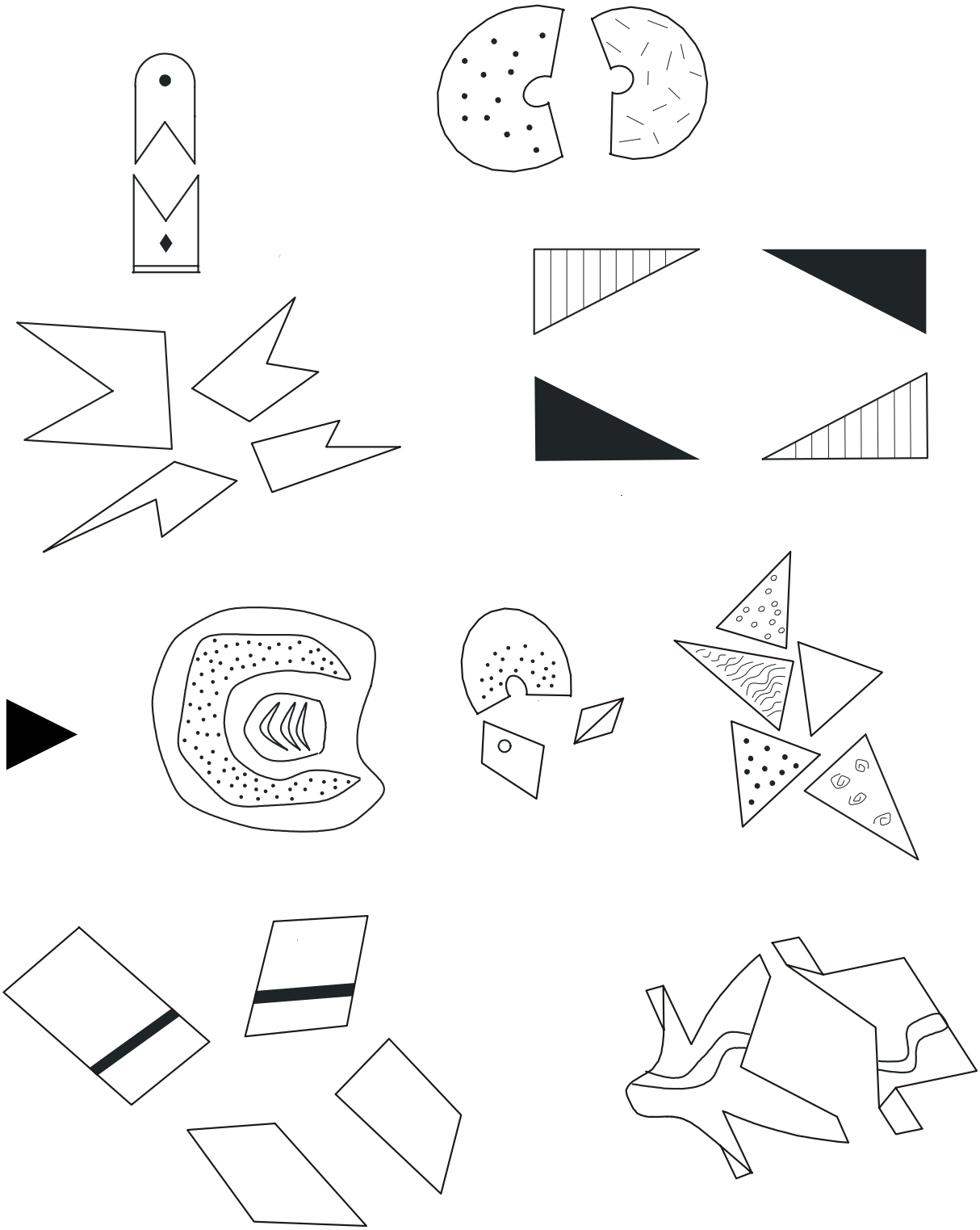
Aims	- Practise analysing - Practise observation - Practise elimination - Beginning sets
Applications (examples)	In class: look at the notion of difference and exclusion, file documents, look for solutions, convergences. Introduction to structuralism. Develop a critical eye when looking at the wording of any instruction. At work: file, organise, find. Look for solutions, create categories for putting away or filing. In everyday life and for leisure: find unexpected results, look for constants in series of situations or events.
Materials	An exercise sheet on which there is a set of 9 geometrical shapes which have a point in common.
Instructions	The pupils must look for the point in common that enables them to group together 8 of the 9 shapes, then determine which shape has no point in common.
Comments	The abundance and confusion of these 9 shapes may seem off-putting at first to some pupils. The teacher then has to bring their attention back to the aim in hand: find the point in common.
Variations (examples)	The type of drawings shown in this exercise can encourage the pupils to imagine their own shapes (or collages) also all with a point in common, bar one.
Individualisation	Yes.
Answers	Yes for information only.

WORK IT OUT	**Classify: by elimination** **“Shapes”**	**9-41**



Classify: by elimination

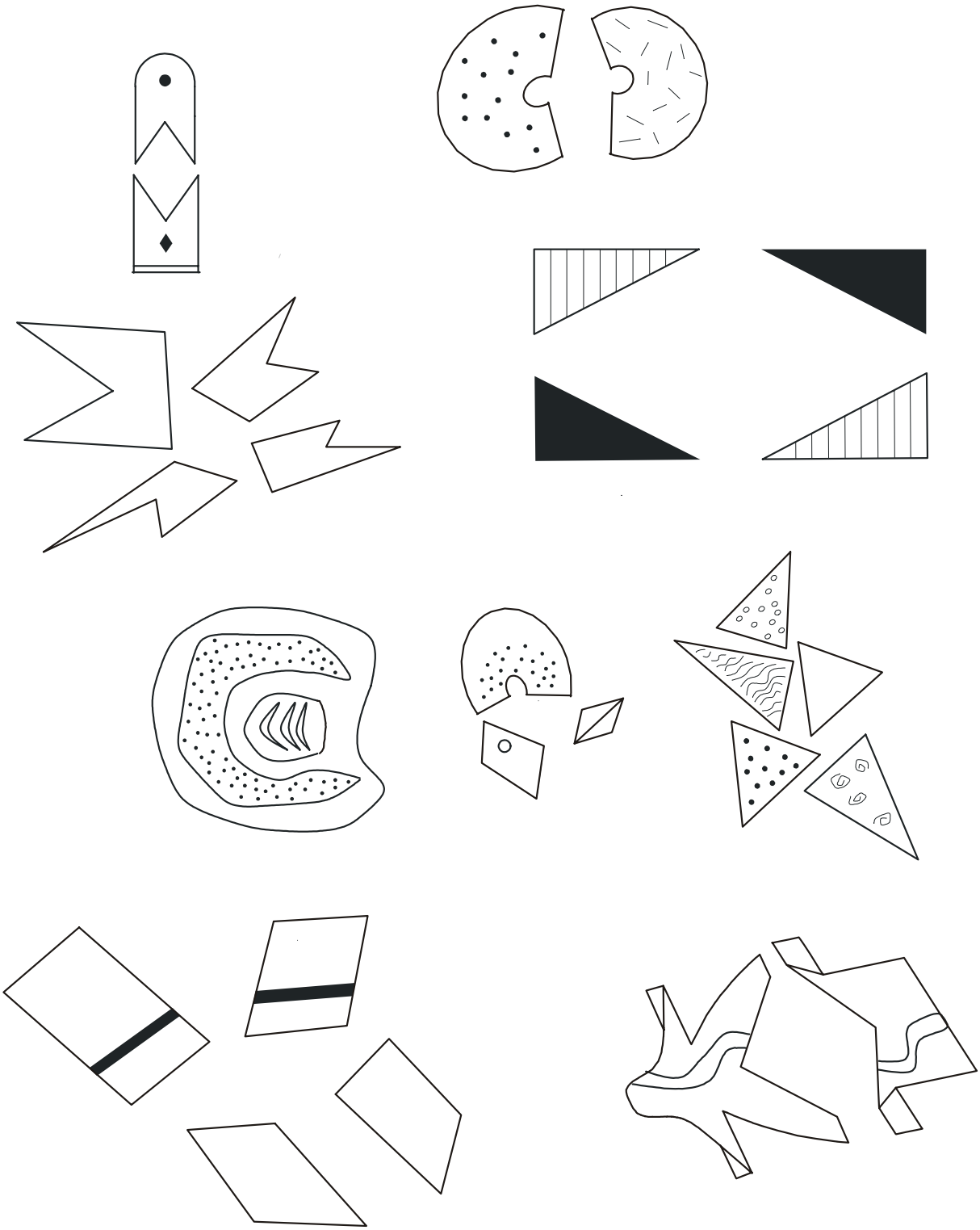
"Shapes"



WORK IT OUT	**Classify: by elimination** **"Shapes"**	**9-41** **Level 4** **Exercise 1**

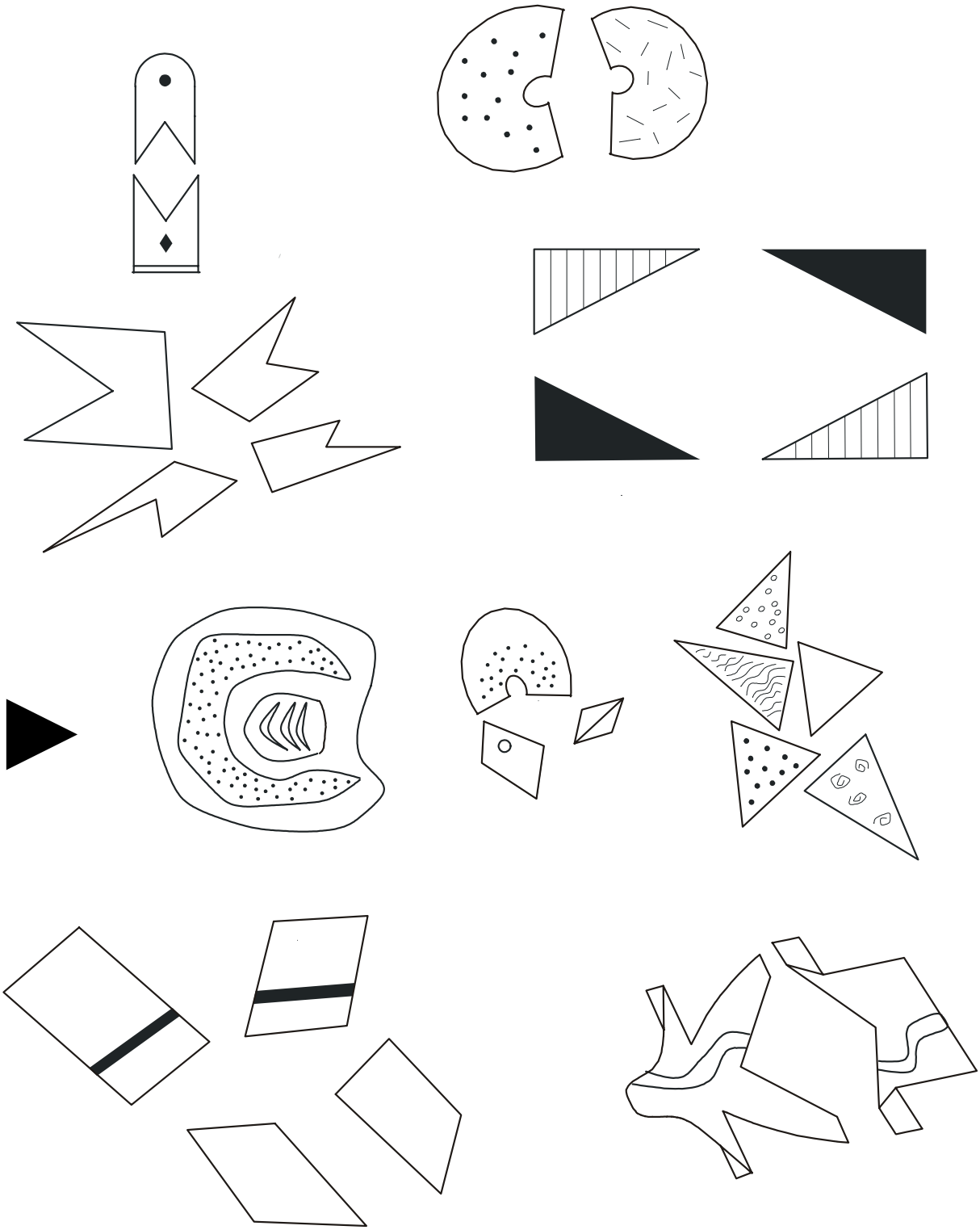
Aims	- Practise analysing - Practise observation - Practise elimination - Beginning sets
Applications (examples)	In class: look at the notion of difference and exclusion, file documents, look for solutions, convergences. Introduction to structuralism. Develop a critical eye when looking at the wording of any instruction. At work: file, organise, find. Look for solutions, create categories for putting away or filing. In everyday life and for leisure: find unexpected results, look for constants in series of situations or events.
Materials	An exercise sheet on which there is a set of 9 geometrical shapes which have a point in common.
Instructions	The pupils must look for the point in common that enables them to group together 8 of the 9 shapes, then determine which shape has no point in common.
Comments	The abundance and confusion of these 9 shapes may seem off-putting at first to some pupils. The teacher then has to bring their attention back to the aim in hand: find the point in common.
Variations (examples)	The type of drawings shown in this exercise can encourage the pupils to imagine their own shapes (or collages) also all with a point in common, bar one.
Individualisation	Yes.
Answers	Yes for information only.

WORK IT OUT	**Classify: by elimination** **“Shapes”**	**9-41**



Classify: by elimination

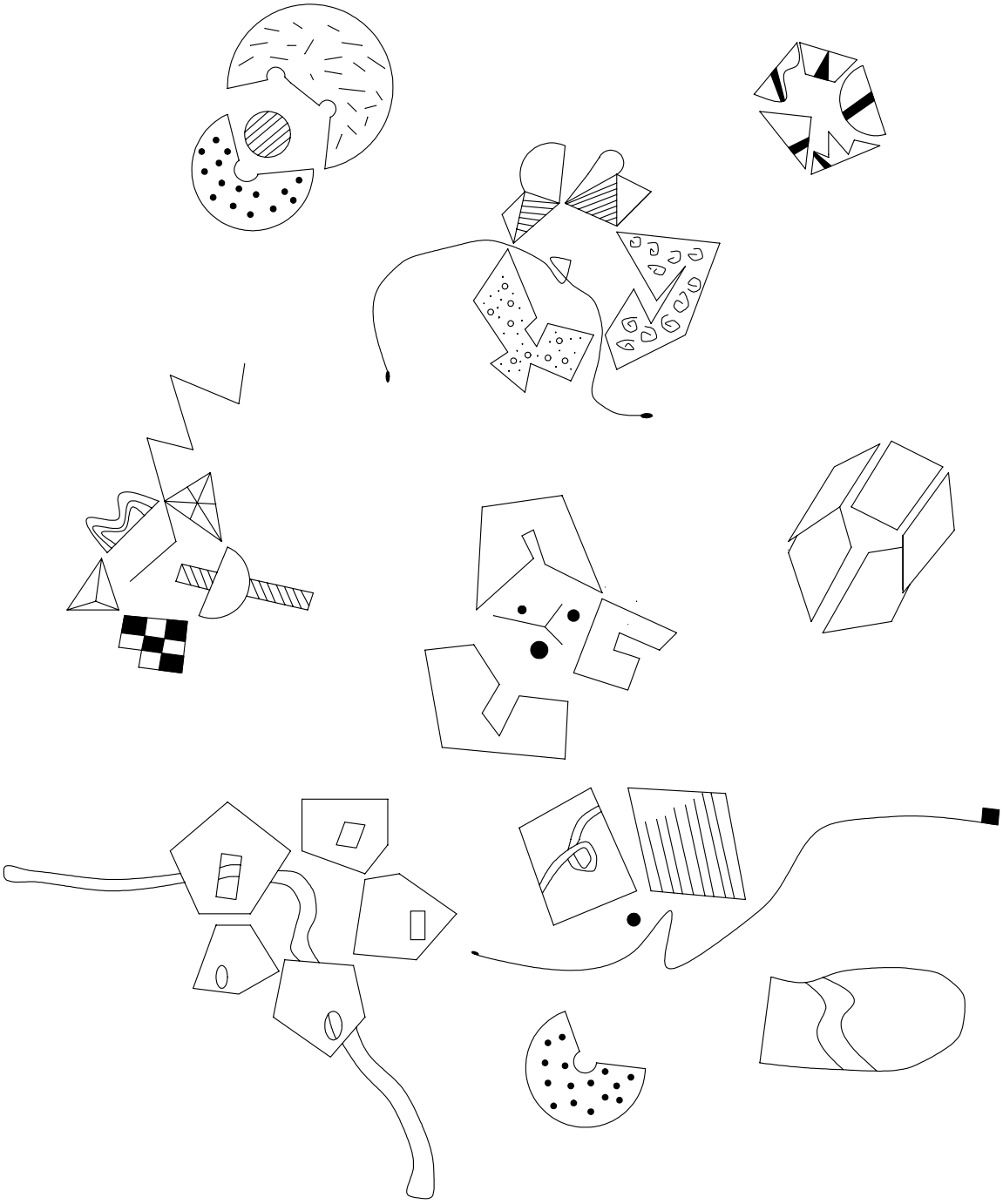
"Shapes"



WORK IT OUT	**Classify: by elimination** **"More shapes"**	**9-42** **Level 4** **Exercise 2**

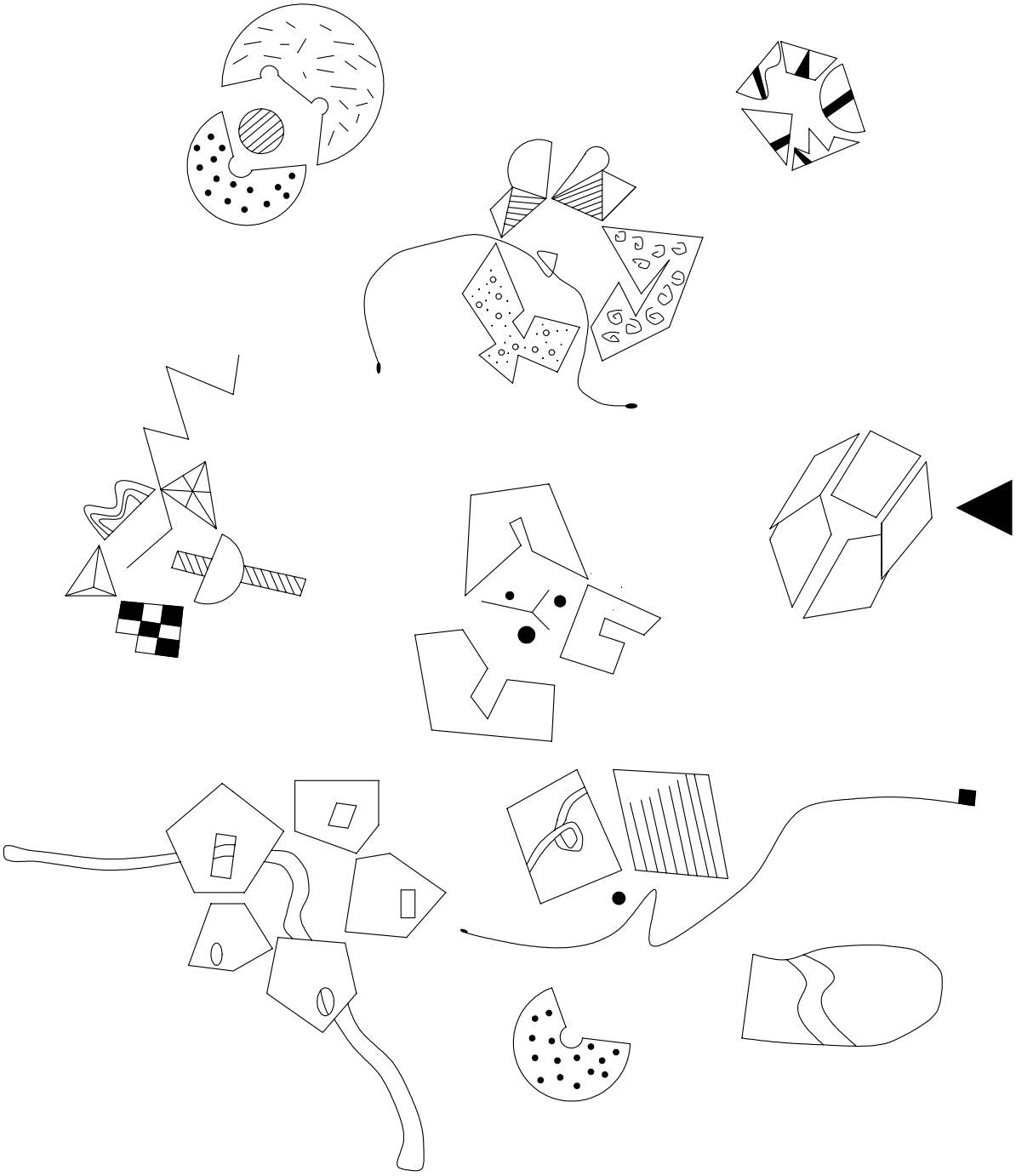
Aims	- Practise analysing - Practise observation - Practise elimination - Beginning sets.
Applications (examples)	In class: look at the notion of difference and exclusion, file documents, assess results, look for solutions or convergences. Introduction to structuralism. At work: file, organise, find breakdowns, dysfunctions, innovations. Look for solutions. In everyday life and for leisure: create categories to understand situations in everyday life, look for solutions.
Materials	An exercise sheet on which there is a set of 8 geometrical shapes which have a point in common.
Instructions	The pupils must look for the point in common that enables them to group together 7 of the 8 shapes, then determine which shape has no point in common.
Comments	The abundance and confusion of these 9 shapes may seem off-putting at first to some pupils. The teacher then has to bring their attention back to the aim in hand: find the point in common. The exercise can also be approached in a different way, especially with pupils who have already done the previous exercise, by showing the answer sheet and asking them to find out why the shape was chosen.
Variations (examples)	The type of drawings shown in this exercise can encourage the pupils to imagine their own shapes (or collages) also all with a point in common, bar one.
Individualisation	Yes.
Answers	Yes for information only.

WORK IT OUT	**Classify: by elimination** **“More shapes”**	**9-42**



Classify: by elimination

"More shapes"



WORK IT OUT	**Classify: by elimination** **"Nothing's perfect!"**	**9-43** **Level 4** **Exercise 3**

Aims	- Practise comparing elements in a series; - Practise finding criteria for constituting groups; - Practise finding the odd one out. - Practise finding several reasons for a choice.
Applications (examples)	In class: Address the notion of difference and exclusion, classify documents, situate yourself in a timetable (at school), assess results. At work: Enter into the logic of a system of representation, find breakdowns and failures, innovations. In everyday life and for leisure: organise your affairs, tidy cupboards, bookshelves, CD and other collections, find unexpected results in all sorts of activities (cooking, for example, or doing the housework).
Materials	An exercise sheet with 5 independent series each containing 4 numbers or 4 letters.
Instructions	The pupils will put a cross (or any other sign) under the series which they think should not be with the others. They must give at least two reasons to explain their choice.
Comments	The teacher can ask the pupils not to limit the criteria for elimination to two, but to try and find as many criteria as possible.
Variations (examples)	The teacher can suggest that the pupils create series including one odd one out, using letters, signs, very simple concrete or abstract drawings, or words, with at least two reasons for eliminating the odd one out. The productions will be shown to the group as an exercise, and the author of the exercise will play the role of the teacher, from the beginning (working out the task) to the end (self-assessment and assessment of the group by the group).
Individualisation	Yes.
Answers	Yes for information only.

Classify: by elimination

"Nothing's perfect!"

A C E G

1 3 5 7

B D F H

3 6 8 10

2 4 6 8

Classify: by elimination

"Nothing's perfect!"

A C E G

1 3 5 7

B D F H

3 6 8 10

2 4 6 8

Here are some suggested reasons for choosing **3 6 8 10** as the odd one out.

- The other series each skip a number (or a letter) in numerical (or alphabetical) order. From 3 to 6, two numbers were skipped, not one.
- This series is the only one which includes a two-figure number, 10.