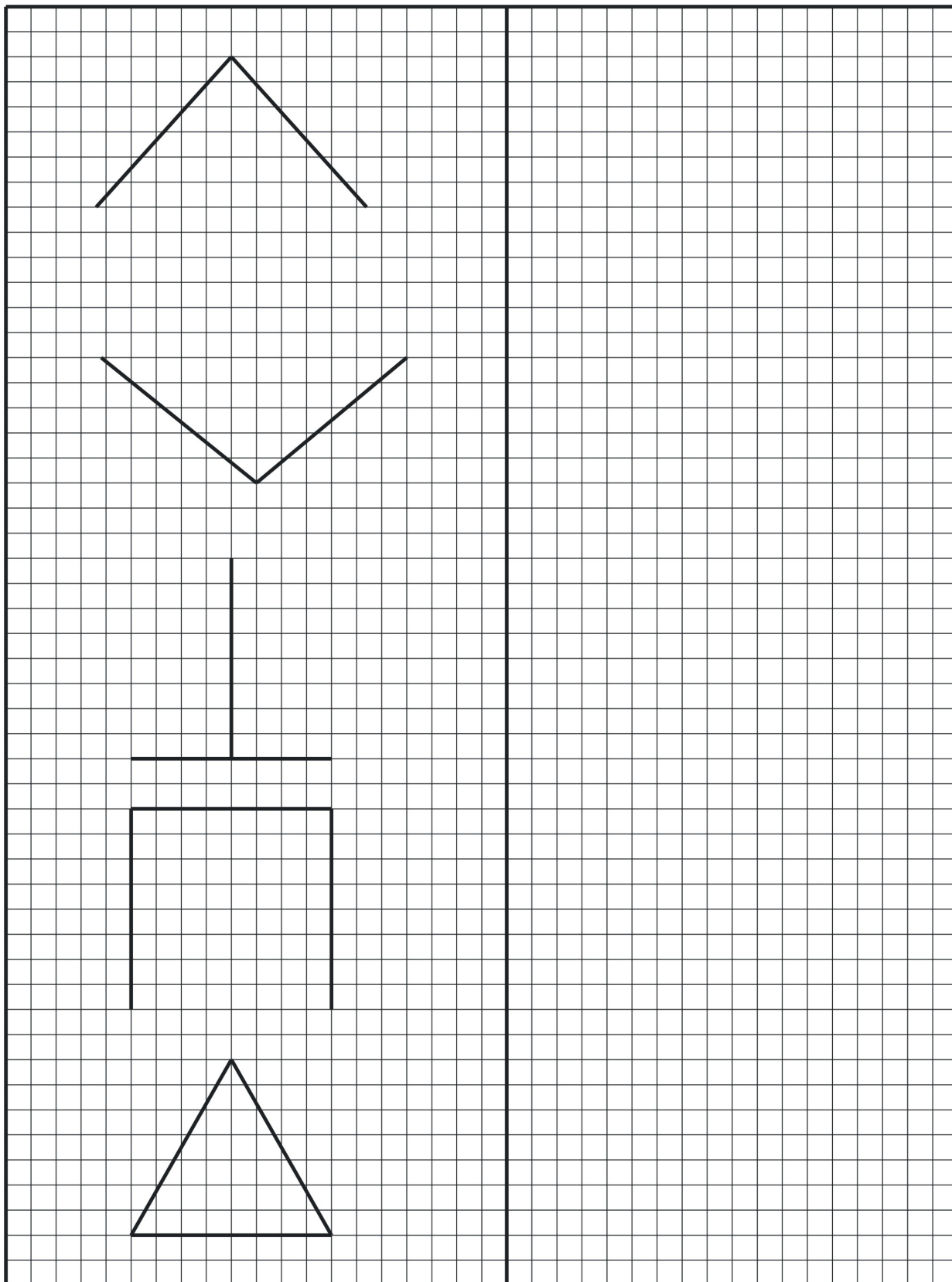
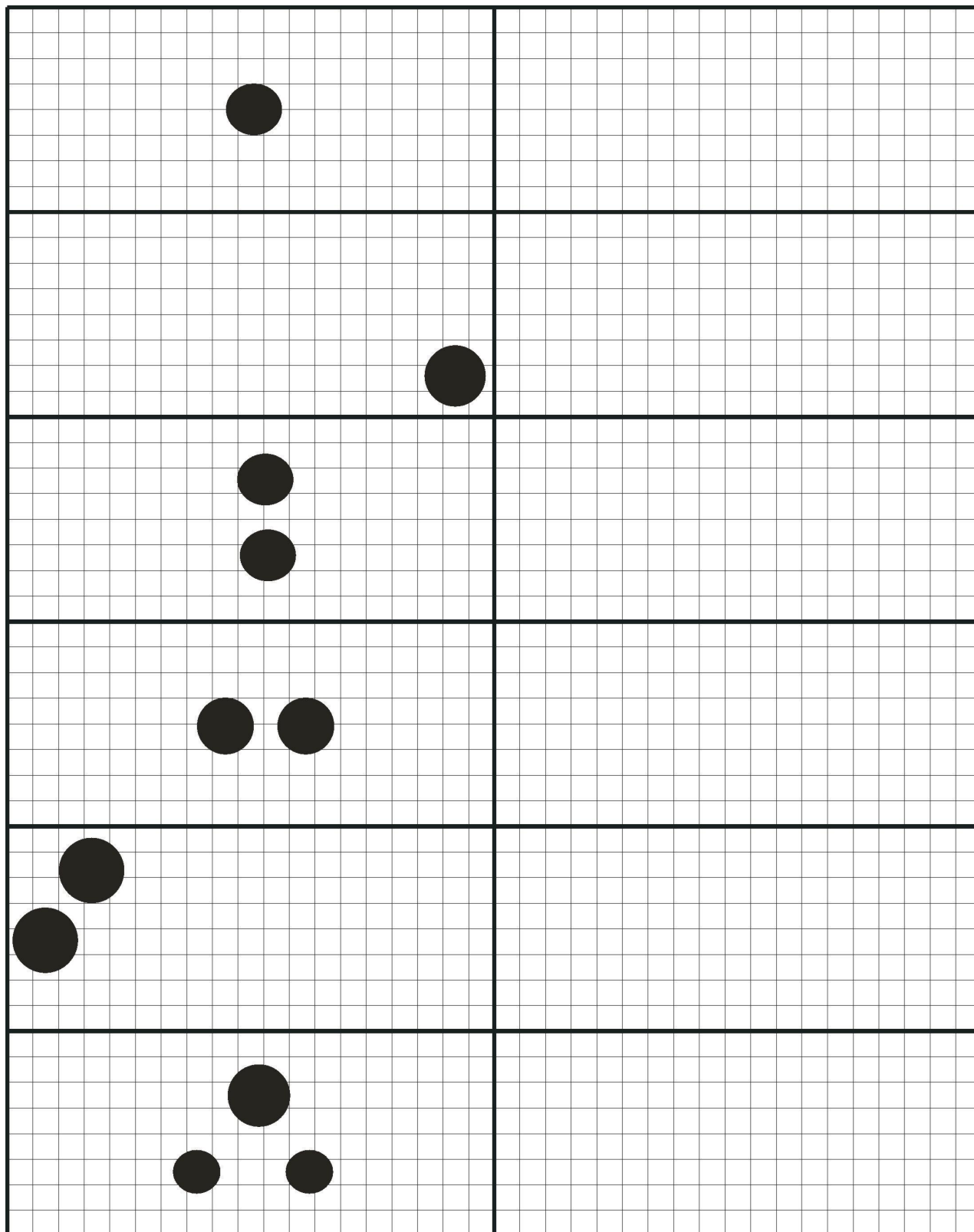
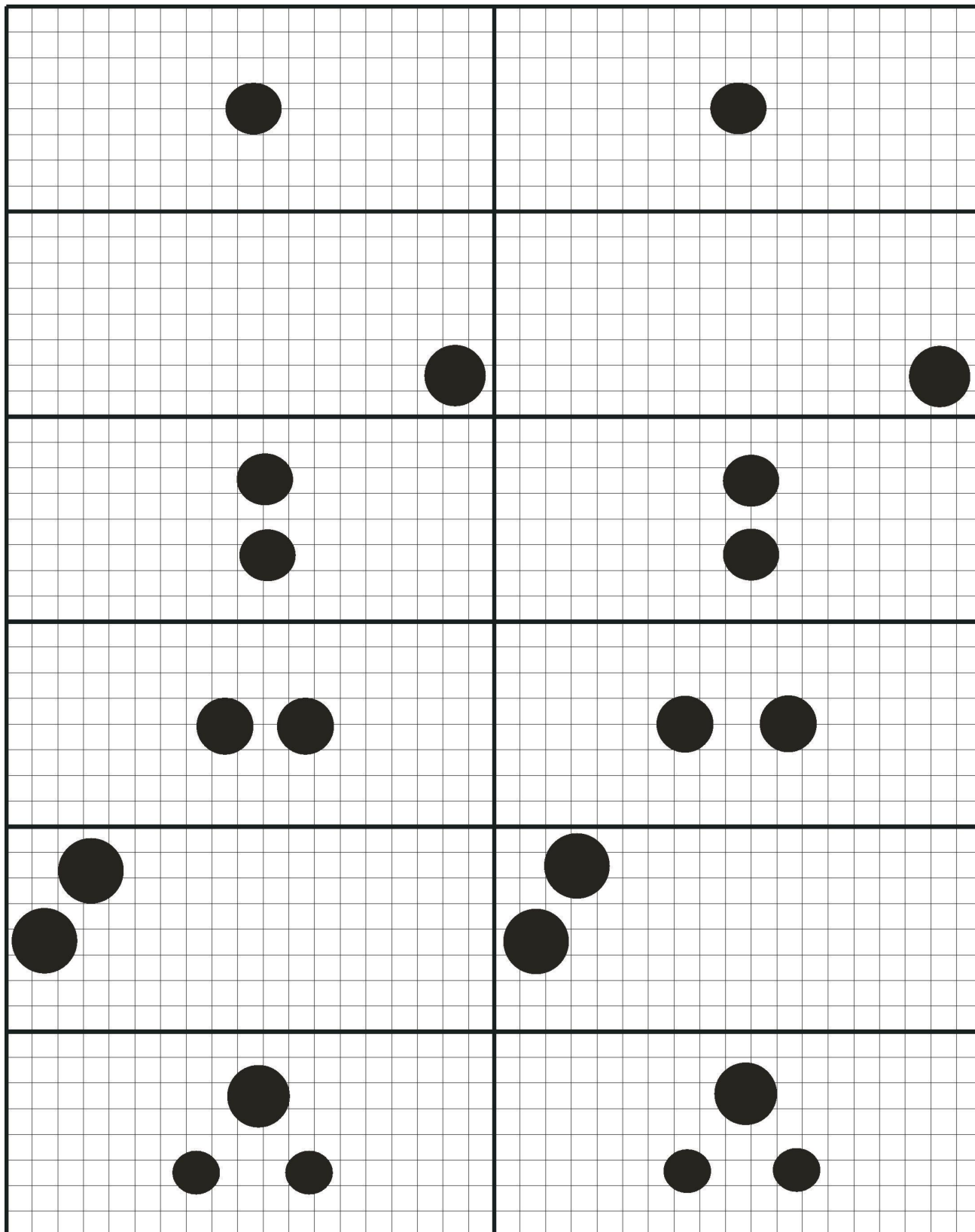


WORK IT OUT	Locate - Manipulate “Shapes”	4-11 Level 1 Exercise 1
Aims	<ul style="list-style-type: none"> - Observe, find centre points, and reproduce a simple drawing with reference points on a squared page. - Practise tracing graphs “from left to right”. - Reproduce a pattern as precisely as possible. - Use squared paper or documents to find reference points and place a form or shape in the required space. 	
Applications (examples)	<p><u>In class</u>: any exercise consisting in reproducing a simple symmetrical shape in the same proportions as the pattern, using the principles of symmetry, for example in geometry exercises, technology, or industrial drawing...</p> <p><u>At work</u>: any task consisting in using reference points and keeping to the information or instructions; any task that uses squares to report information or results. Understand different graphs.</p> <p><u>In everyday life and for leisure</u>: use reference points, particularly those shown on squares. Better understand a graph, such as those found in newspapers; use the grid references on a street map. Use the symmetry of a given pattern when making decorative objects or crafts, making clothes, knitwear or crochet, making made-to-measure furniture, etc., particularly for cutting out clothes when the pattern only gives one side of the body (front / back, left / right) and in sewing or model-making when you have to put one piece on top of the other to assemble, sew or adapt to size...</p>	
Materials	<p>A page with squares, on which there are simple geometric style drawings in the left-hand squares, and nothing in the right-hand squares.</p> <p>Twenty or so matches (or small wooden or plastic sticks) for each pupil.</p> <p>A few rolls of sticky tape to fix the matches.</p>	
Instructions	<p>Using the matches supplied, the pupils try to reproduce, in the right hand column, all the shapes drawn on the left. Their positioning should be identical to the example shown. The matches can be stuck on with the sticky tape.</p>	
Comments	<p>It is interesting to compare how the pupils choose to stick their matches. It can also be suggested that the tape be as invisible as possible.</p>	
Variations (examples)	<p>The pupils can also use the matches, the sticky tape and a photocopy of the squared paper to create other shapes (or to write their initials). They can cut the matches if they wish, in which case several pairs of scissors should be provided for the group.</p>	
Individualisation	<p>Yes.</p>	
Answers	<p>No, the pattern gives the answer.</p>	



WORK IT OUT	Locate - Manipulate “Pastilles”	4-12 Level 1 Exercise 2
Aims	<ul style="list-style-type: none"> - Observe, and select according to the required size. - Handle and identify the space to be used. - Find a centre or off-centre point using the squares provided. - Find references with the squares on the page to use a given space. - Beginning notions of symmetry around a given point (rotation), around an axis (mirror effect) or sliding. - Beginning the notion of imprecise limits. 	
Applications (examples)	<p><u>In class</u>: any exercise consisting in reproduction a simple shape symmetrically, keeping the proportions of the model, using the principles of symmetry, for example in geometry exercises, in technology, in industrial drawing, etc.</p> <p><u>At work</u>: any task consisting in using reference points and keeping to certain information or restrictions; any task consisting in using squares to mark information or results. Understand graphs, such as those found in workshops, describing increased production or rates of defective parts, etc.</p> <p><u>In everyday life and for leisure</u>: situate yourself approximately in a system of precise reference points: in gardening, for example (placing plants in a flower bed) or in cooking preparations (setting out food decoratively) or better still, seat people around a table for a meal.</p>	
Materials	<p>A sheet of squared paper with, on the left-hand side, circles placed in certain precise places on the squares, and the right-hand side left blank.</p> <p>A set of large and small stickers (like those found in the model) for each pupil.</p>	
Task	<p>The pupils will stick the same pastilles (or stickers) in the squares on the right as those in the squares on the left, keeping exactly to the same dimensions and places.</p>	
Comments	<p>The pupils can look for a simple way of assessing the precision of their work compared to the pattern. The teacher will suggest that they work in twos with their two worksheets. The method in question is for them to look at their work placed over the model on the page of another pupil, up against the light.</p>	
Variations (examples)	<p>The teacher can suggest that the pupils invert the layout of each pattern. It then becomes interesting to compare the ways in which each pupil interprets the inversion, as it can be taken lengthways or widthways for the second and fourth squares. The pupils should notice that for the other squares, the shapes are centred and therefore cannot be inverted.</p>	
Individualisation	<p>Yes.</p>	
Answers	<p>Yes.</p>	





WORK IT OUT	Locate - Manipulate “Shapes”	4-13 Level 1 Exercise 3
Aims	<ul style="list-style-type: none"> - Practise differentiating shapes by their form and position. - Work on notions of left/right and row/column. - Obey instructions given orally. 	
Applications (examples)	<p><u>In class</u>: any exercise consisting in recognising a simple shape and being able to identify a shape by its position in a space or in relation to other shapes.</p> <p><u>At work</u>: introduction to geometry plane, to move on from imitation to the beginnings of autonomy. Any activity requiring oral instructions to be understood quickly, possibly even by telephone.</p> <p><u>In everyday life and for leisure</u>: find it easier to follow instructions given orally (by the supplier of a machine, a delivery man, a repairman, etc.).</p>	
Materials	<p>A page with simple geometric shapes.</p> <p>A set of coloured stickers for each pupil.</p>	
Task	<p>The teacher will state the exact position where the pupils have to stick the stickers, for example:</p> <ul style="list-style-type: none"> - place a red sticker in the square in the second row - place a blue sticker under the triangle pointing towards the left - etc. 	
Comments	<p>If the pupils find it difficult to identify the shapes by their names, the teacher can specify exactly where the shape is in the row. For example: place a green sticker just above the third shape in the second row.</p> <p>The teacher can also help the pupils to learn the names of the various shapes shown, but only after having done the exercise as suggested above, so as not to mix problems of comprehension and location. The exercise can then be done again using the names of the shapes.</p>	
Variations (examples)	<p>The teacher can suggest that the pupils take part in explaining the task by taking turns to think of and describe a place and sticker colour for the group. The teacher will then write down what was said in order to read what was asked for when pooling the pupils' answers.</p>	
Individualisation	<p>Yes.</p>	
Answers	<p>No.</p>	

