Geometric quick images

In these geometric quick images as students look for meaningful ways to see each image they may see it as a whole (a box, three cubes long and two cubes high), decompose it into memorable parts (four triangles, pointing up, down, up, down).

Focus:

- Organising and analysing visual images
- Developing concepts and language needed to reflect on and communicate about spatial relationships
- Using geometric vocabulary to describe shapes and patterns

Procedure:

1. Show the image for 3 seconds
2. Students draw or build what they saw. Give students a few minutes with relevant material (paper and pencil, unifix blocks, tangrams, pattern blocks) to draw or construct a figure that matches the mental image they have formed
3. Show the image again for revision. After showing the image for 3 seconds have students revise their drawings or building according to what they saw in the second viewing. Make sure that enough time is available for most students to complete their attempts at drawing and building. While they may not have completed their figure, they should have done all they can do until the image is displayed again.
4. Show the image for the third and final time. This time leave the image visible so that all students can complete and revise their solutions.
5. Discuss the mental images the students formed. Have them share the different ways they saw the figure as they looked at it in successive quick images.

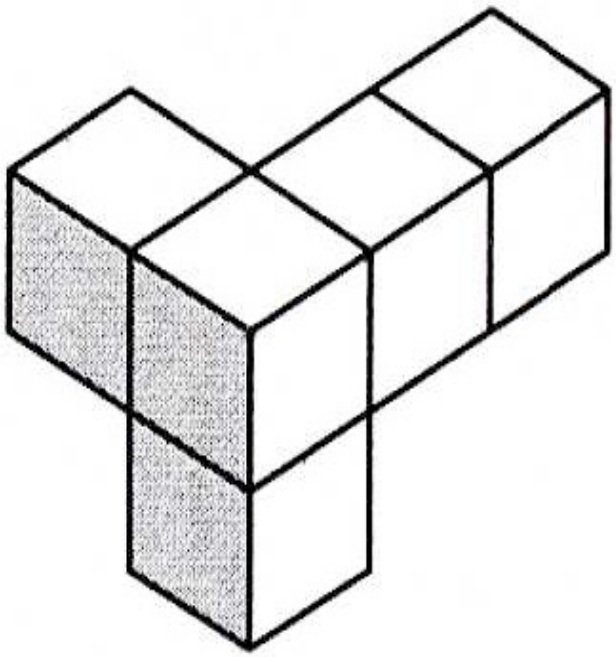
2-D geometric designs

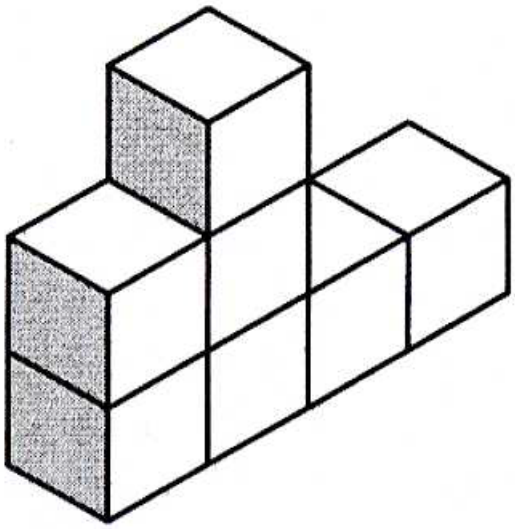
Many students will say things like “I saw four triangles in a row”. You might suggest this strategy for students having difficulty: “**Each design is made from familiar geometric shapes. Find these shapes and try to figure out how they are put together**.”

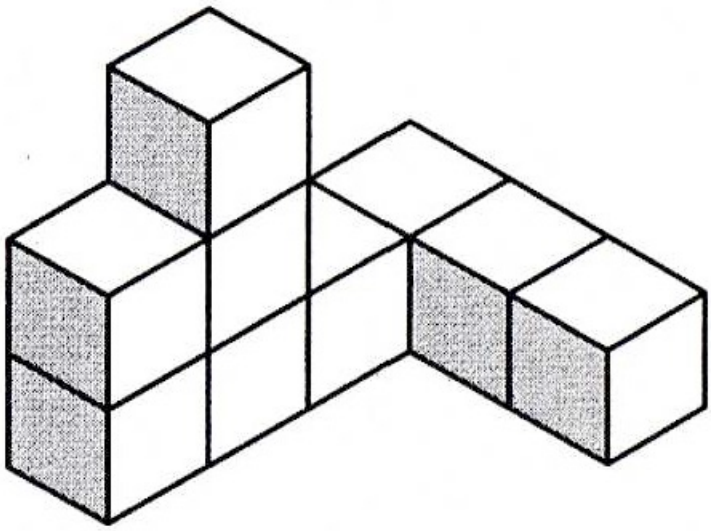
As students describe their figures, you can **introduce the correct geometric terms for component shapes**. As you use these terms naturally in class discussion, students too will begin to recognise and use them.

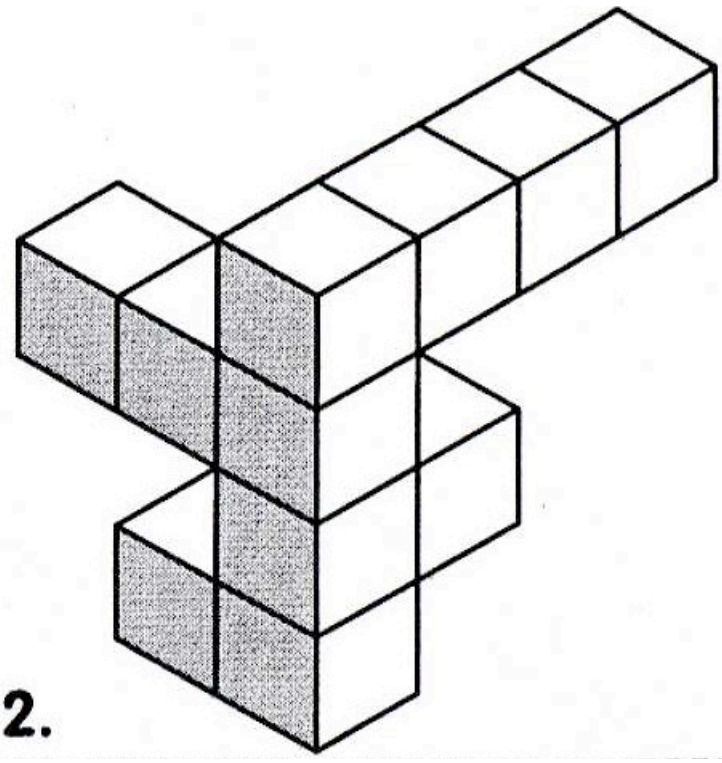
3-D cubes

Students need 15-20 cubes for this activity. Several of the quick image cube figures are intentionally ambituous as some unseen cubes “in the back” may or may not be part of the figure. Students with differing solutions should have opportunities to compare and defend their constructions.









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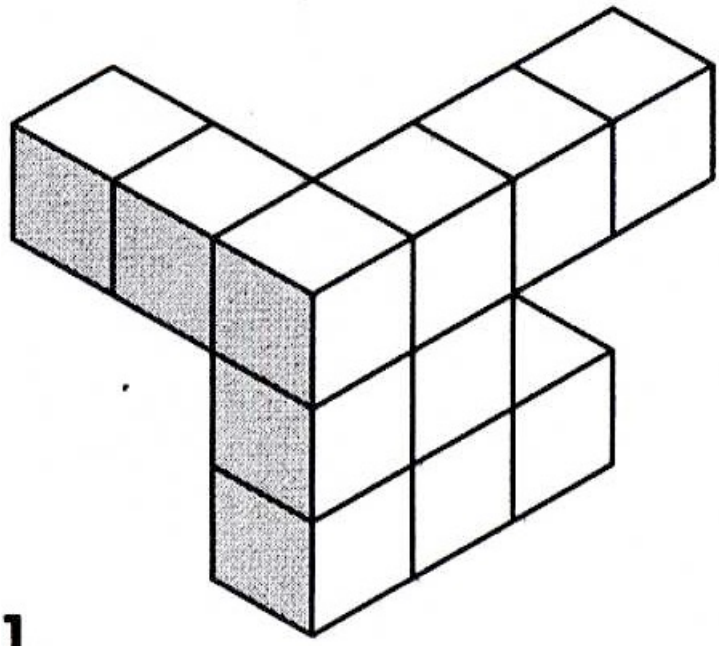
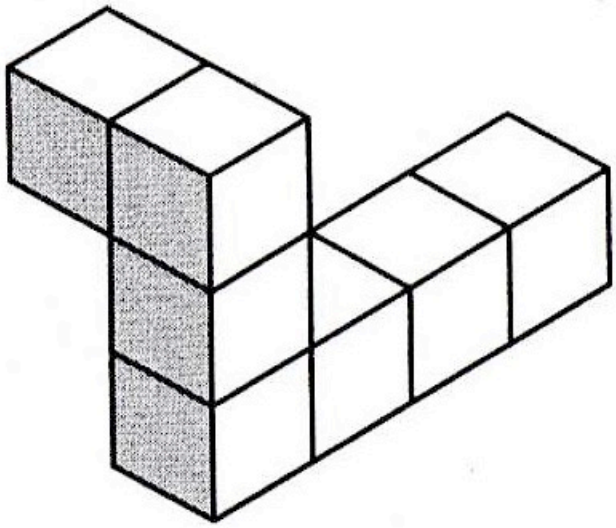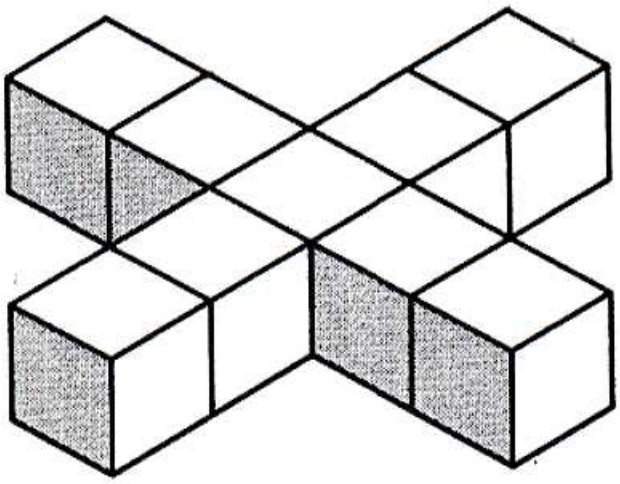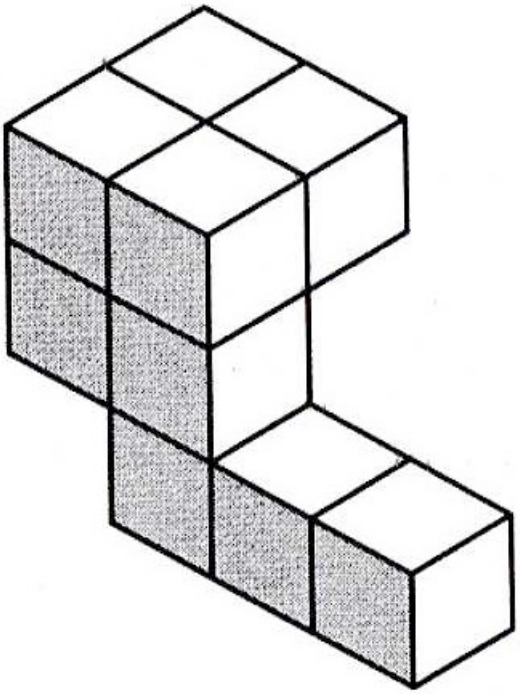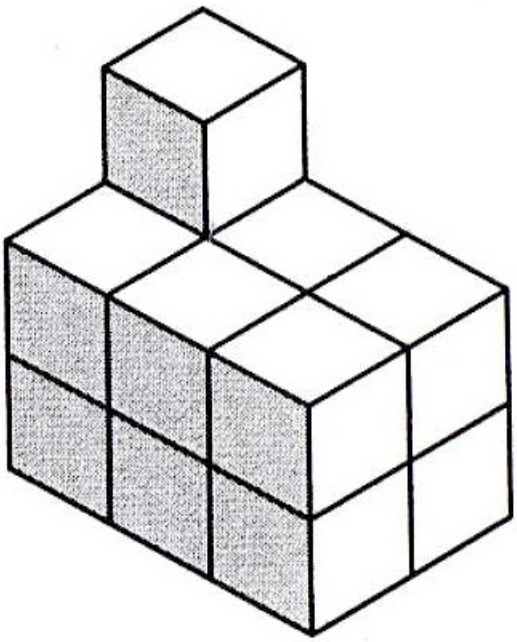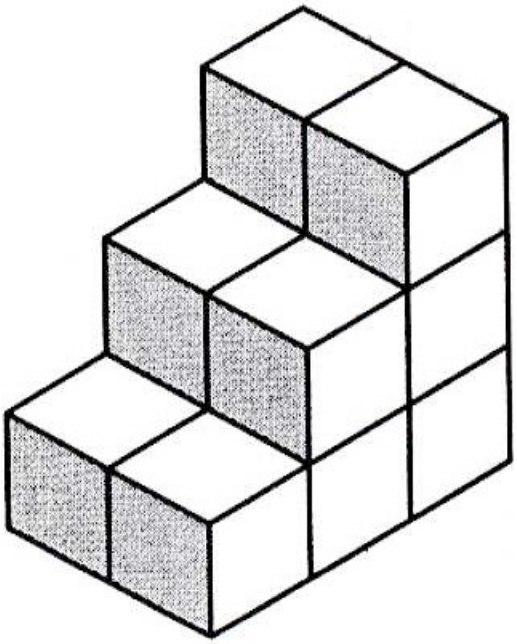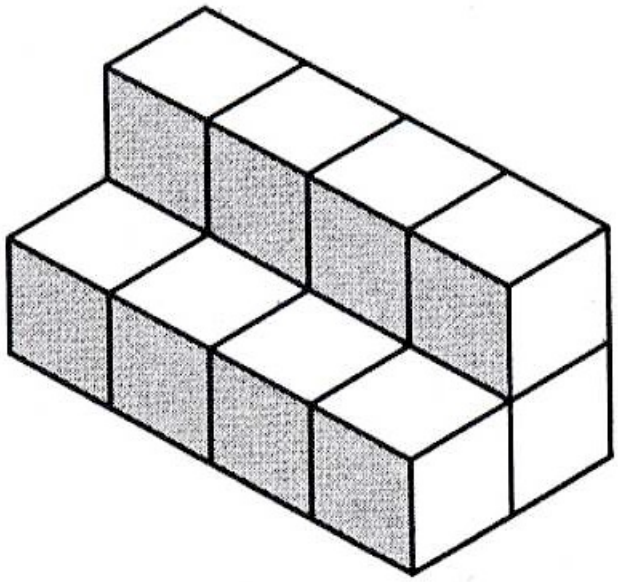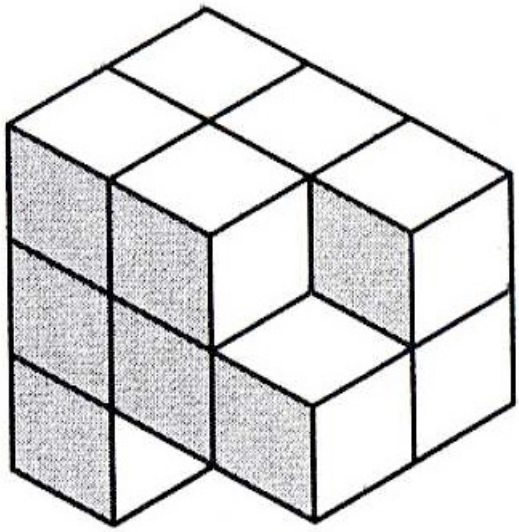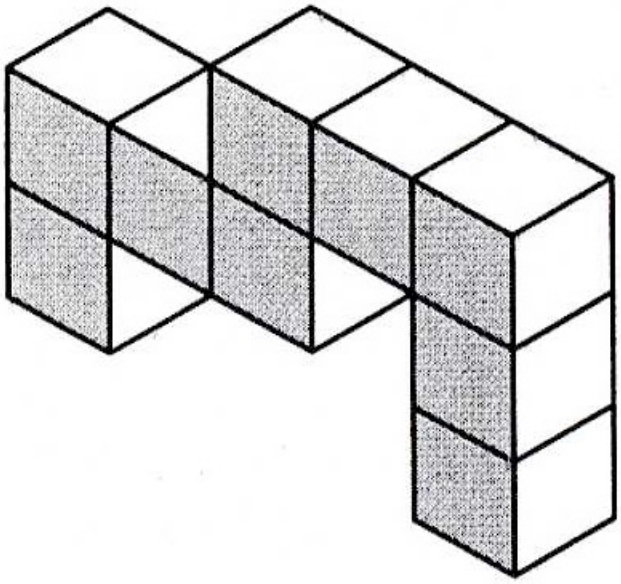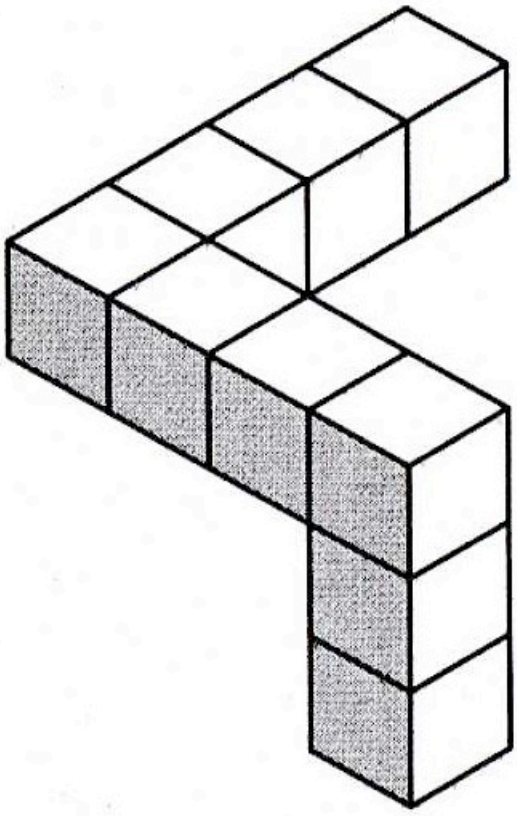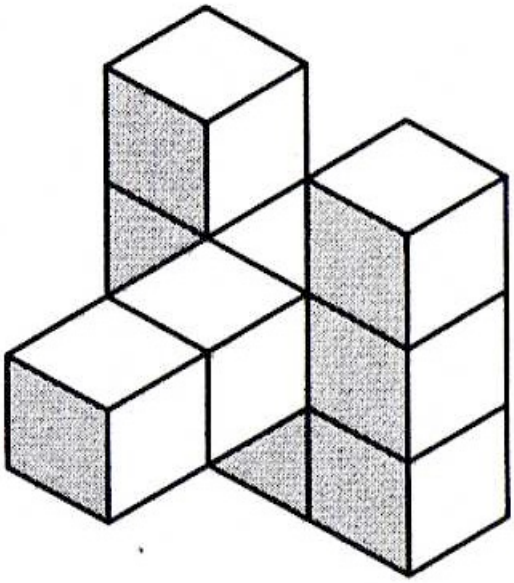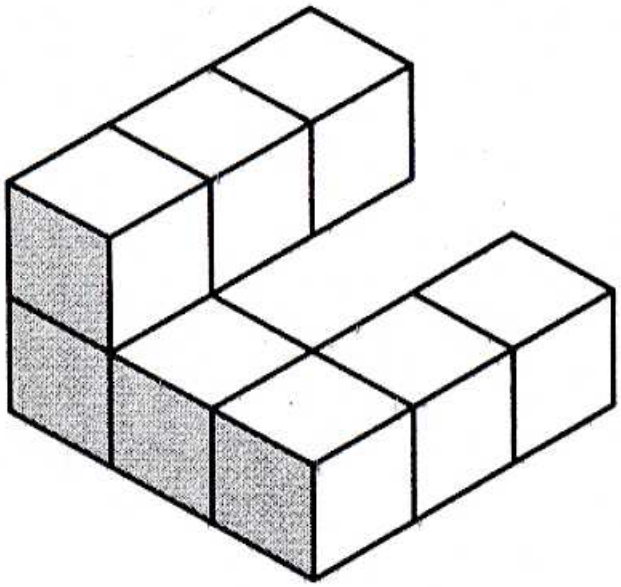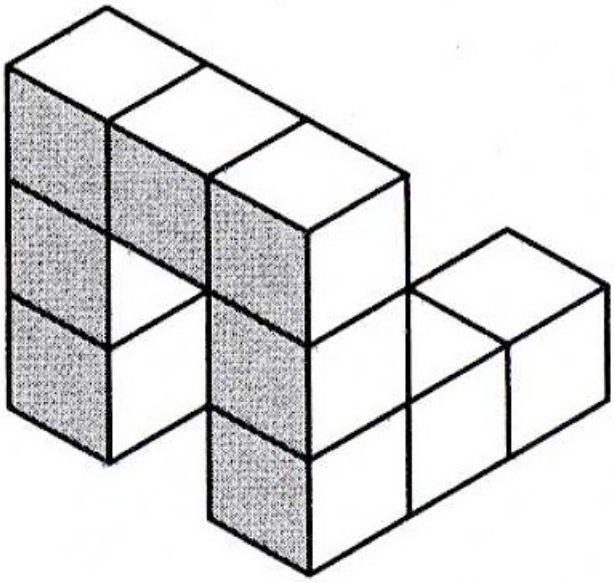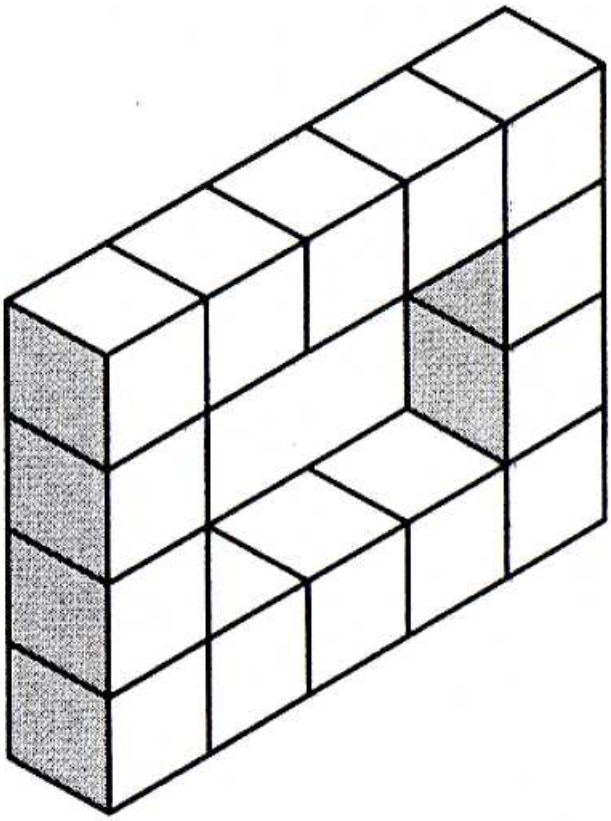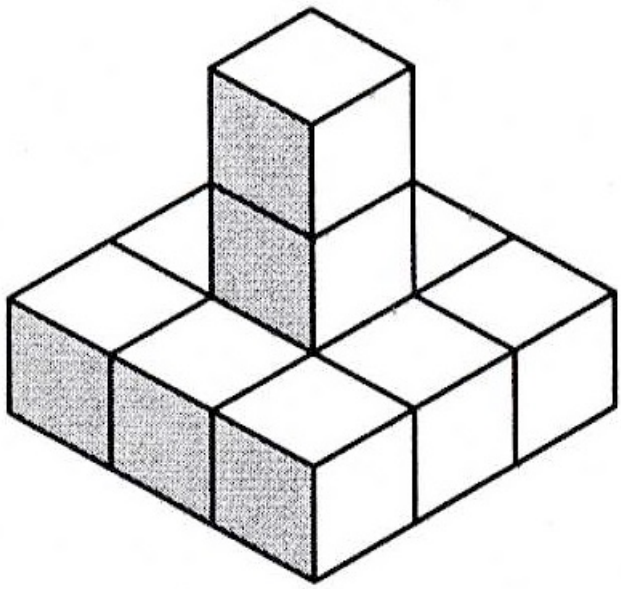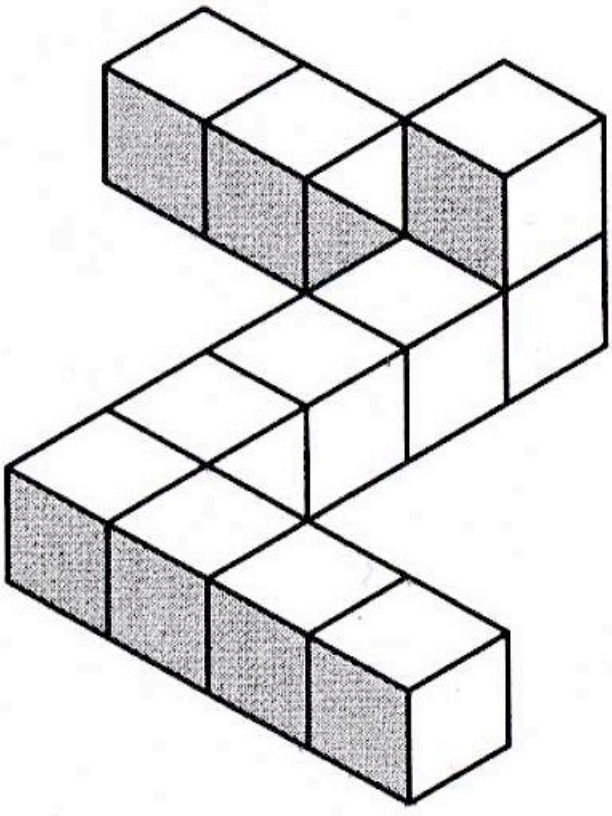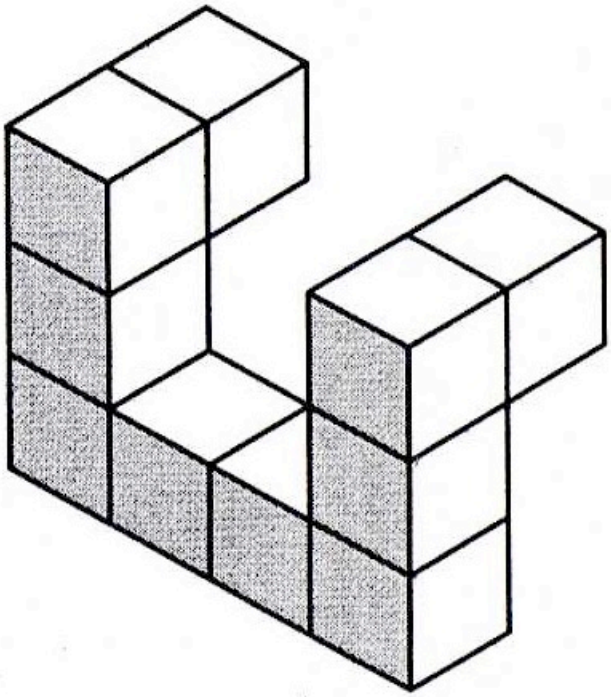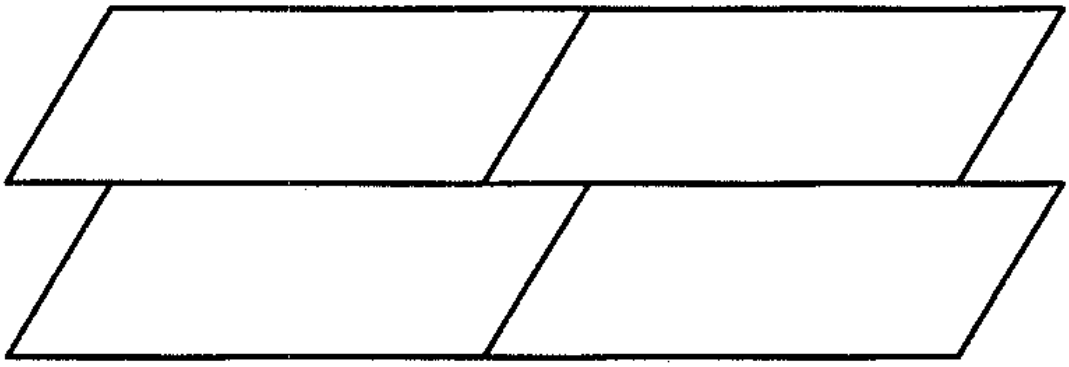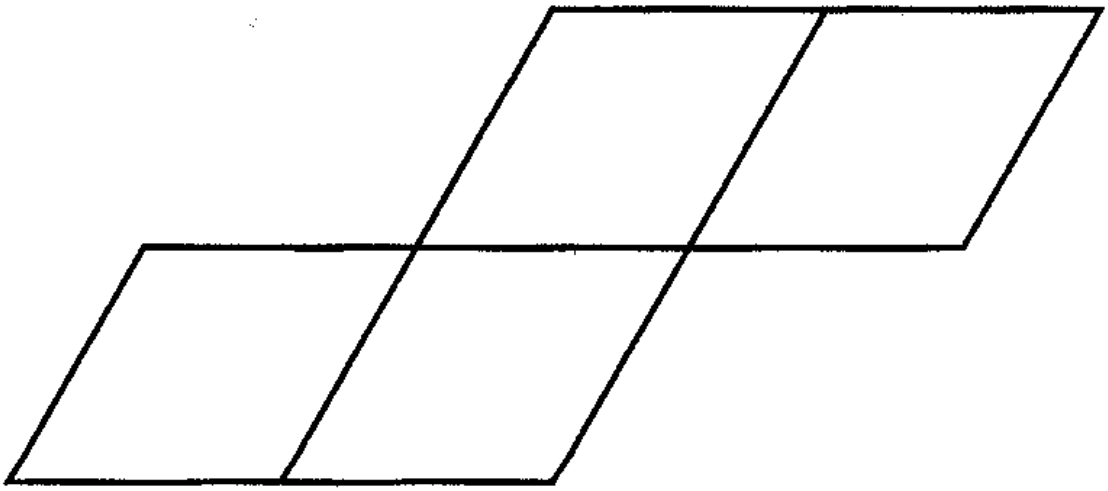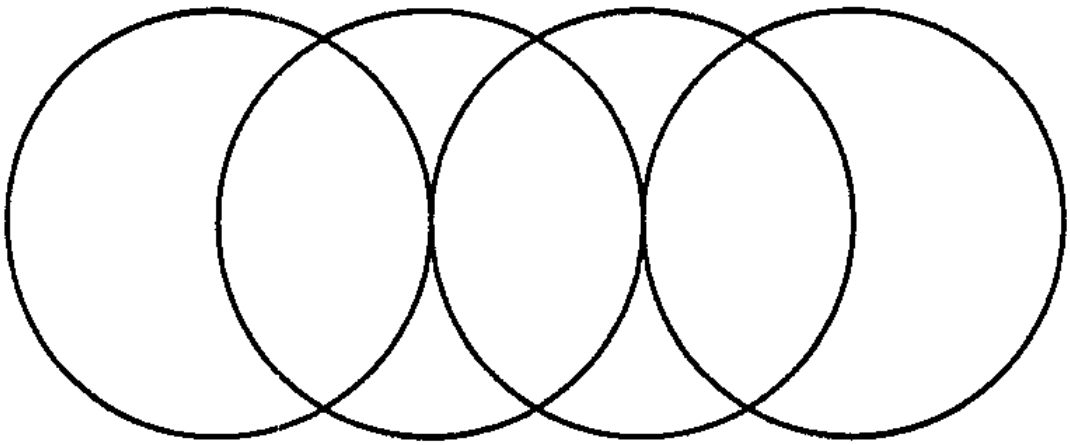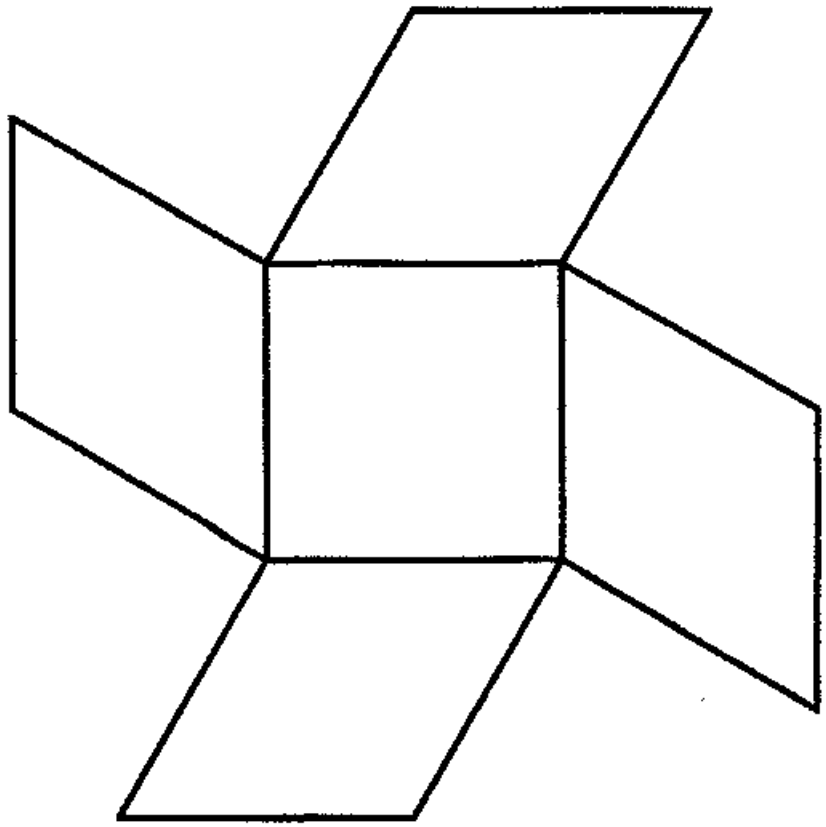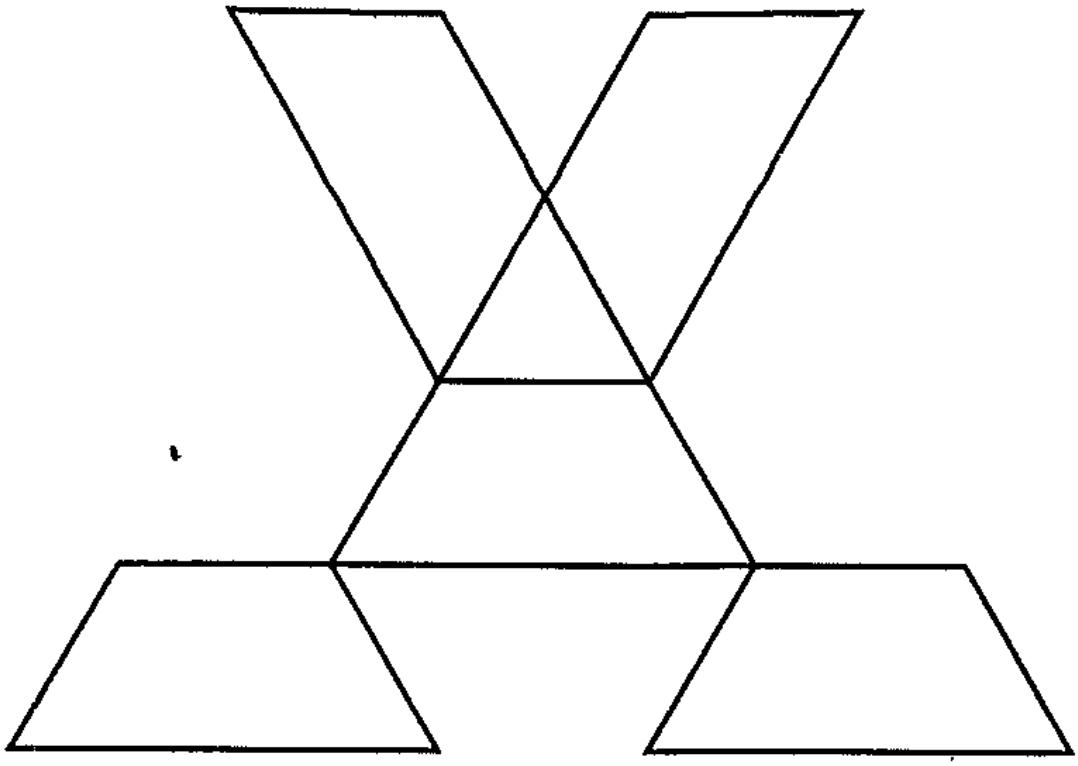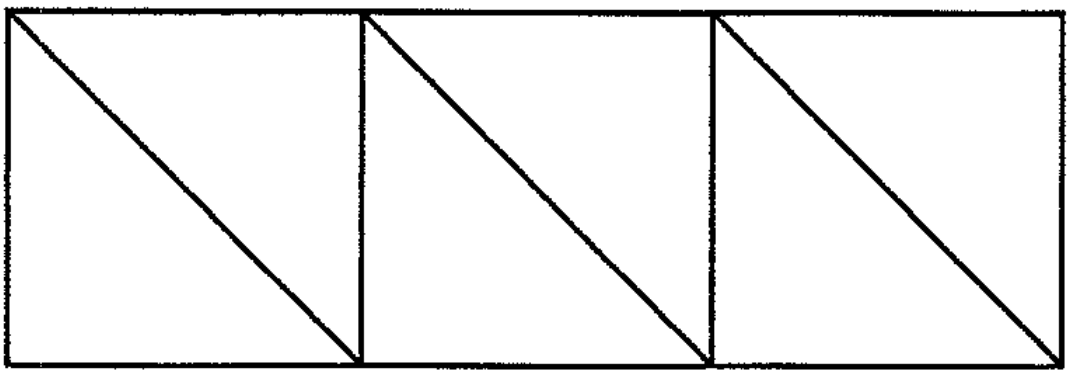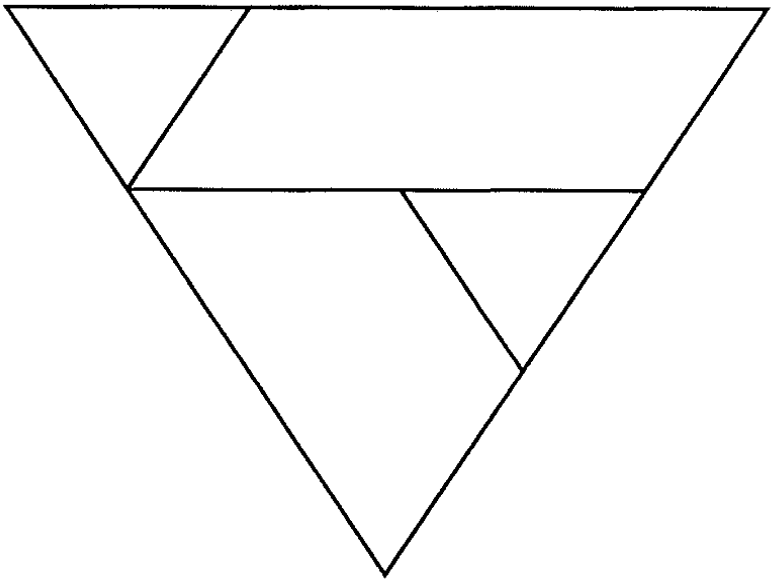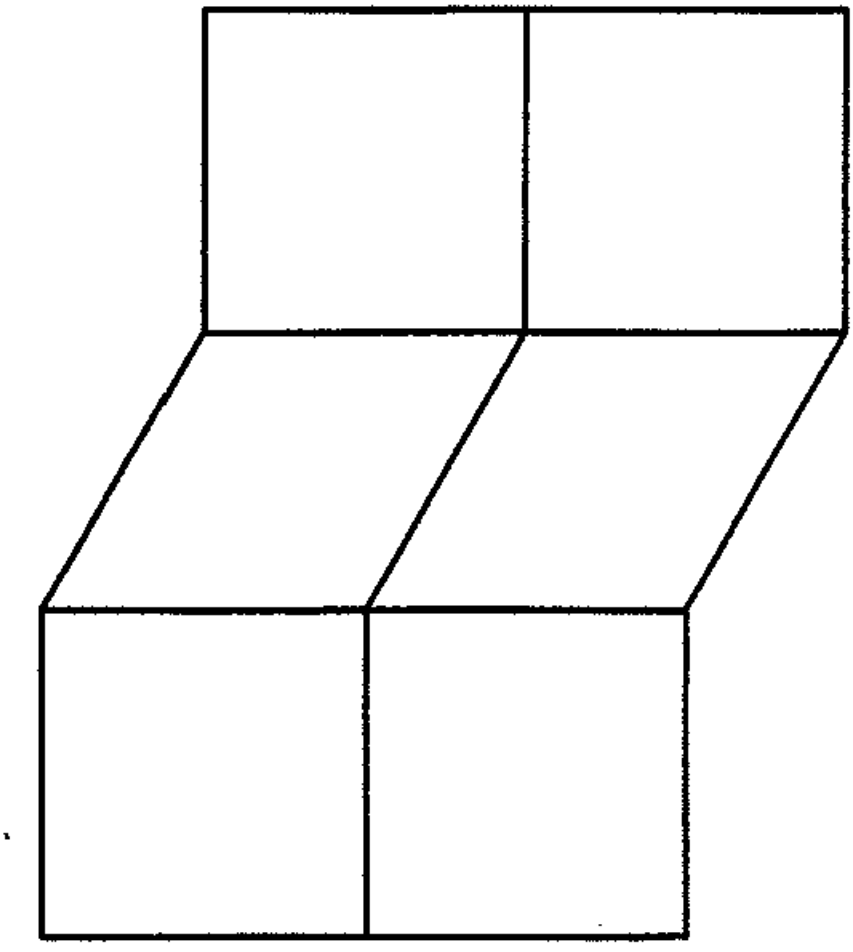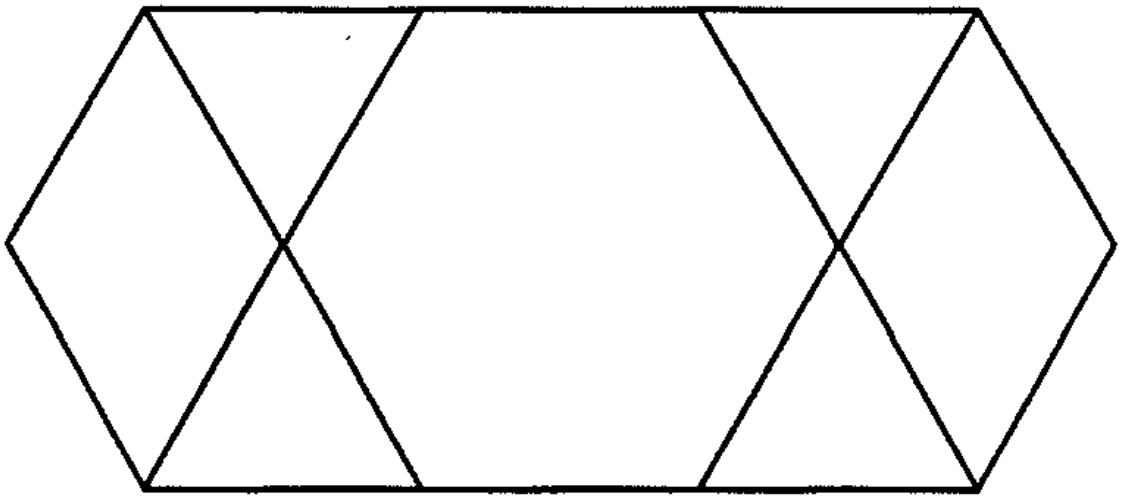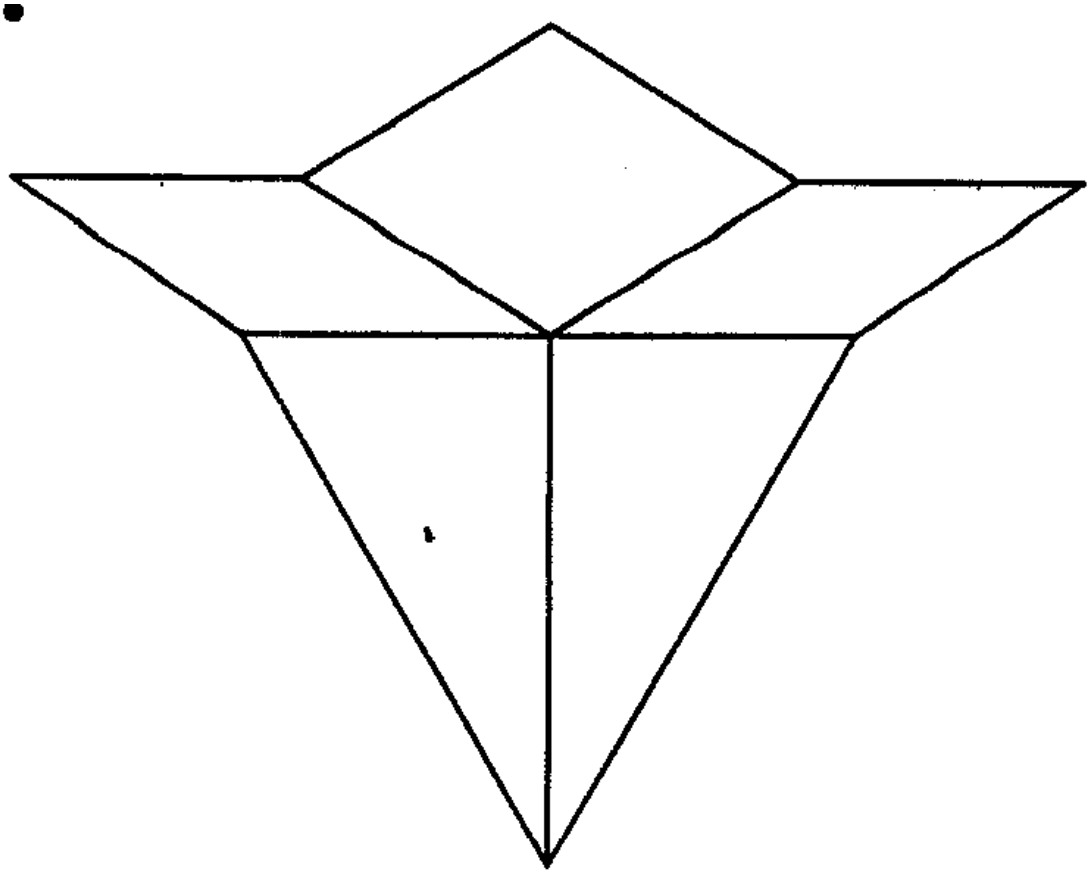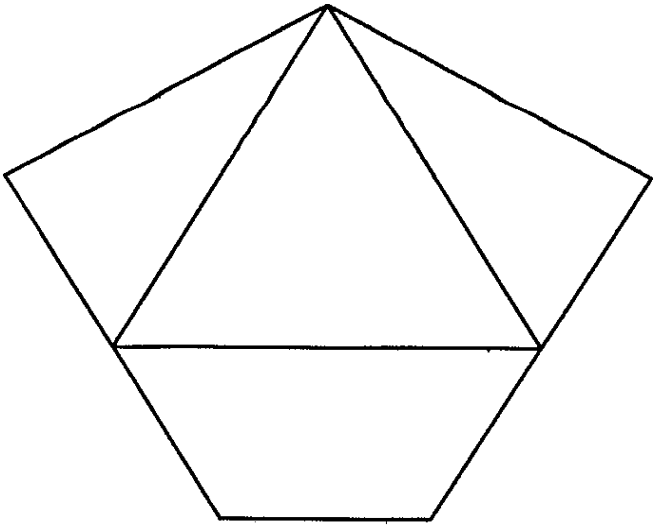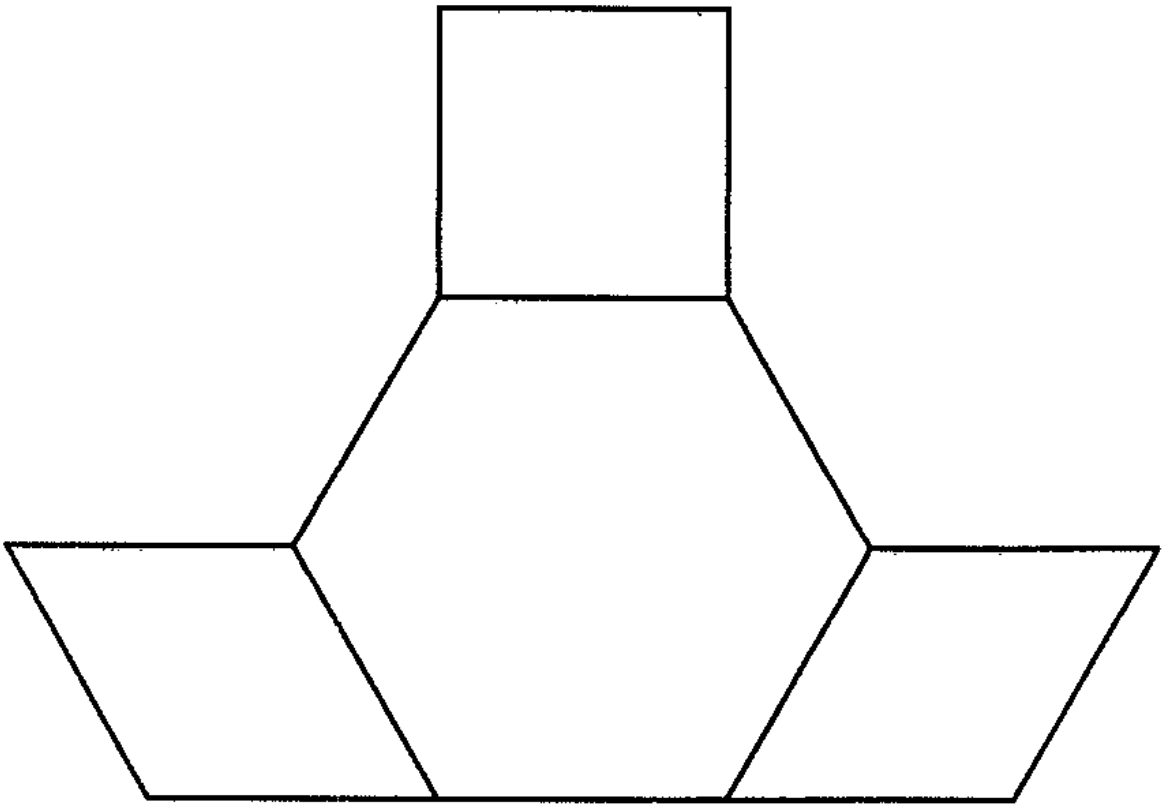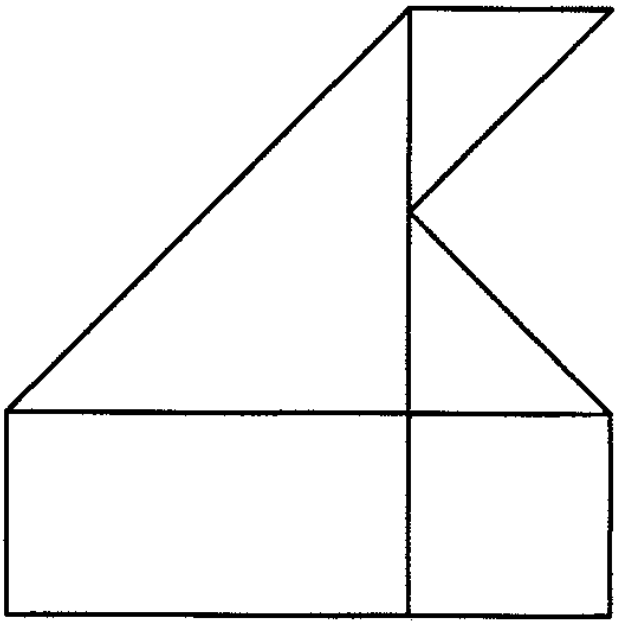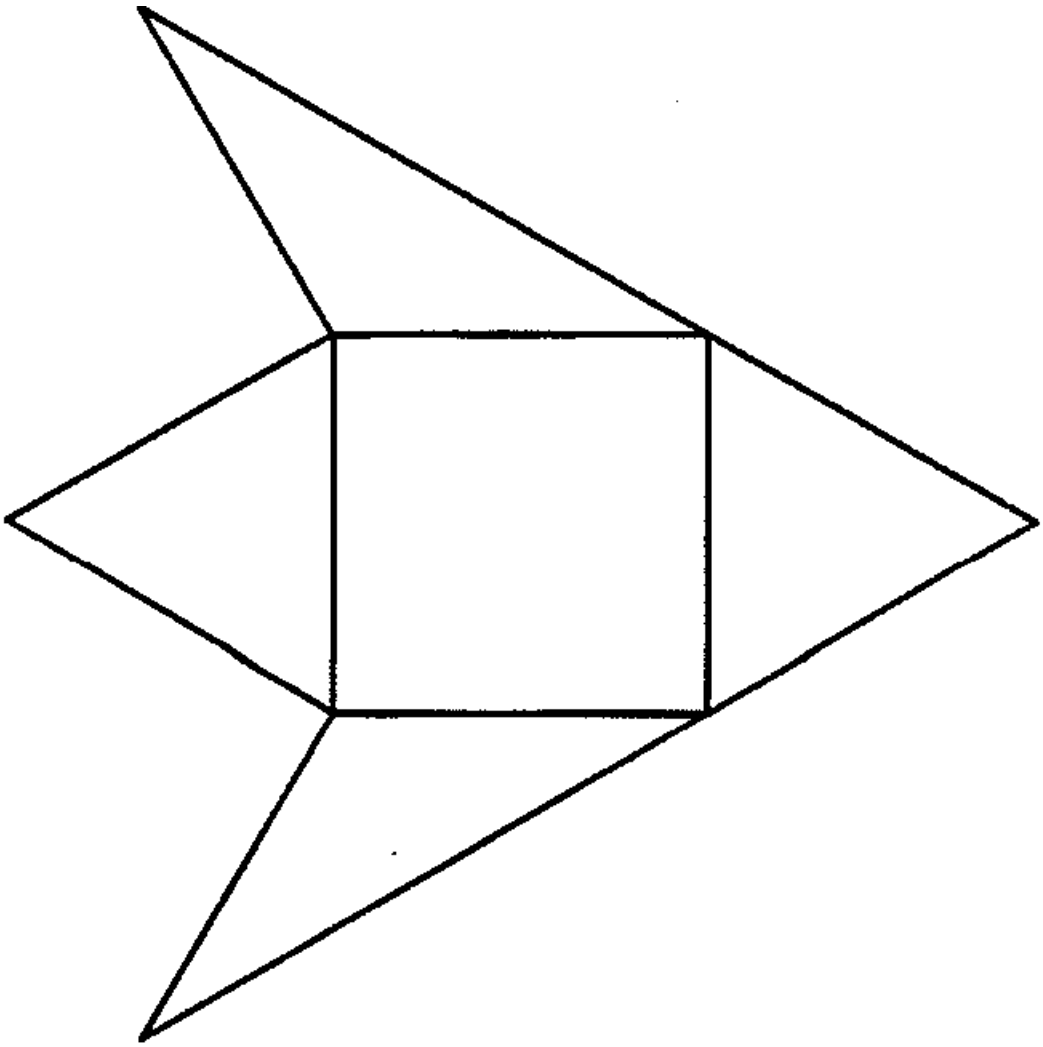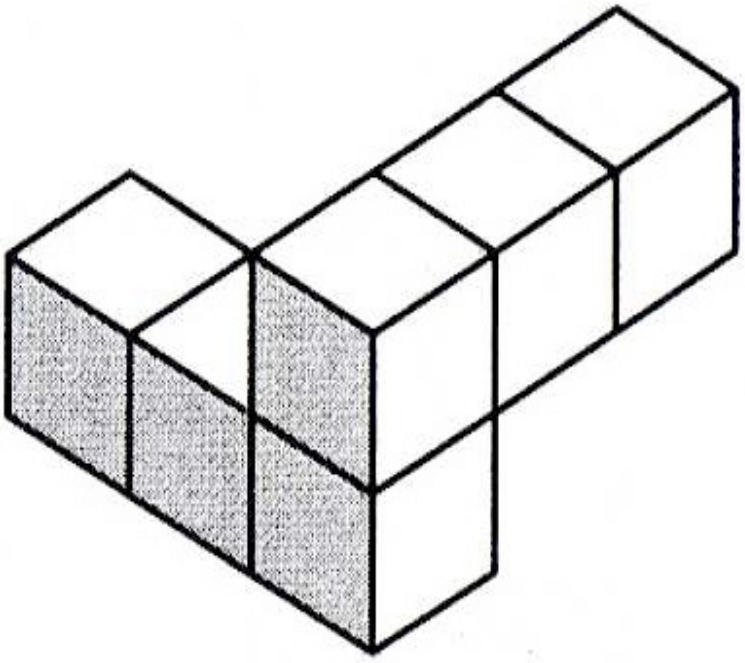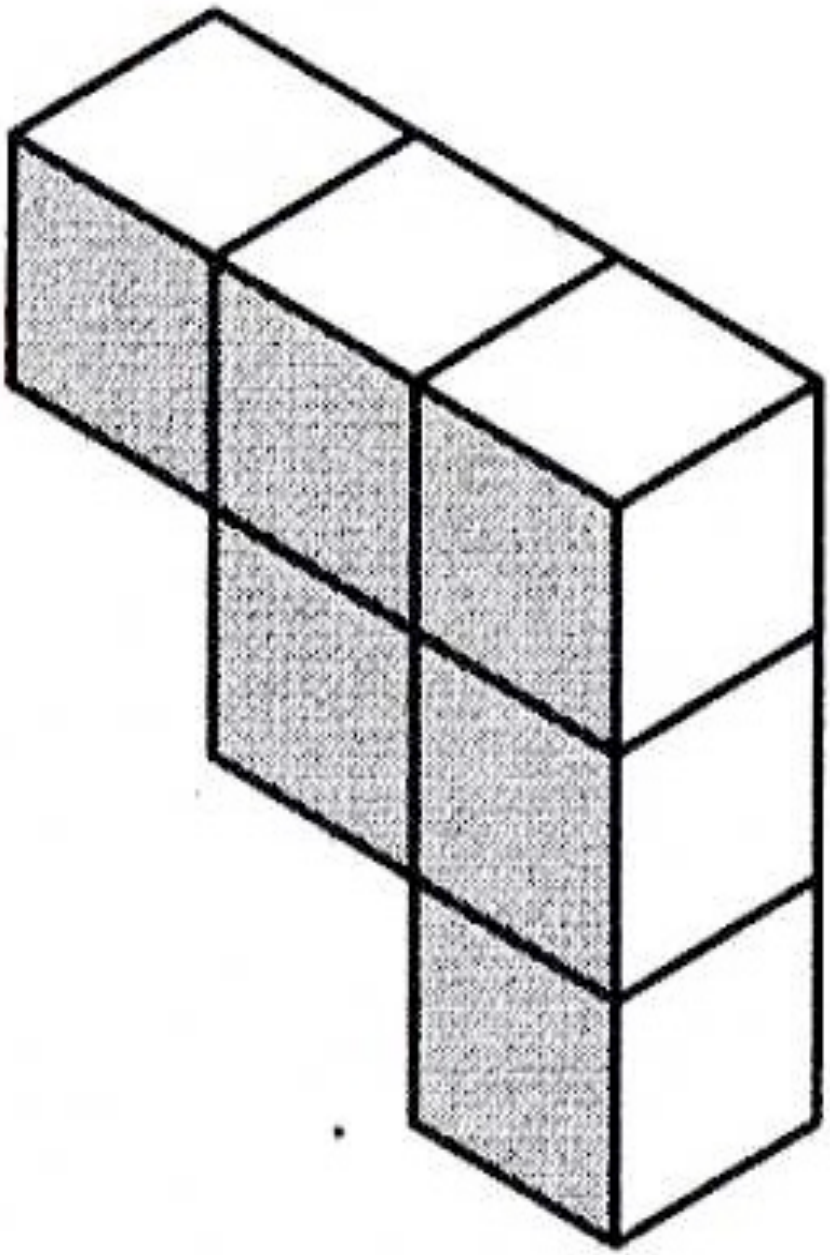
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