

TWO DIMENSIONAL DESIGN

CHAPTER 12: SPACE

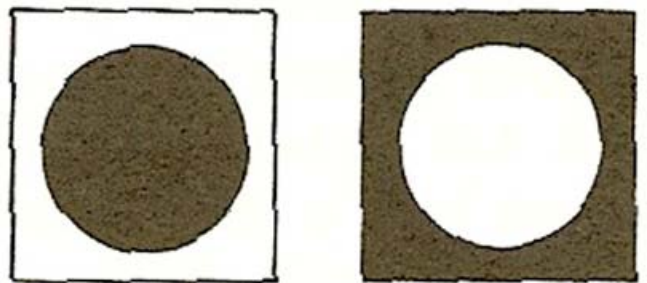
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Definition

- ❑ The nature of space is rather complex because there are many ways space can be viewed.
- ❑ Space may be positive or negative, flat or illusory, ambiguous, or conflicting. Each of these aspects will be carefully examined here.

Positive and Negative Space

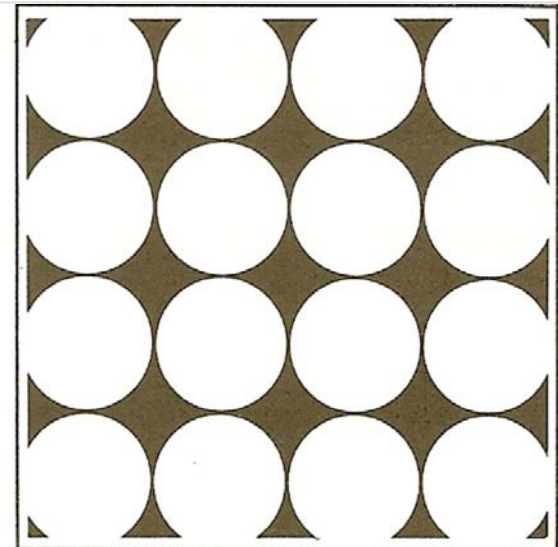
- ❑ Positive space is what surrounds a negative form, and negative space is what surrounds a positive form.
- ❑ All positive forms contain positive space, but positive space is not always perceived as a positive form.
- ❑ Similarly" all negative forms contain negative space, but negative space is not always perceived as a negative form.



Positive and Negative Space

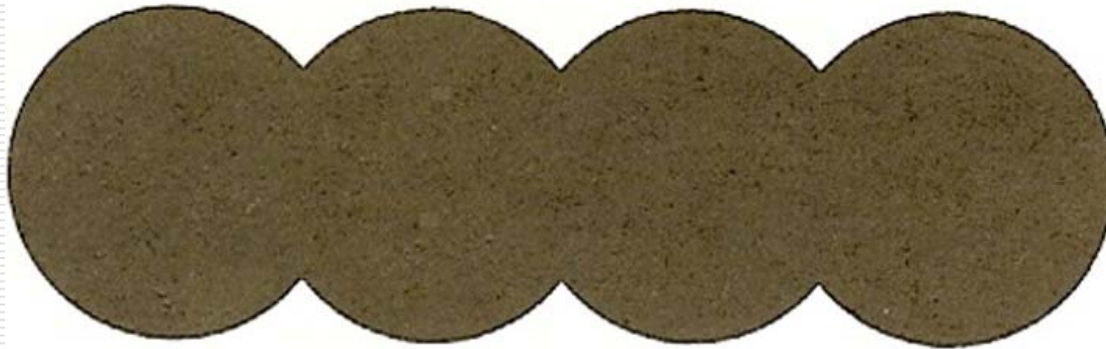
❑ Of course, positive (or negative) space completely or nearly isolated by negative (or positive) forms can be identified as positive (or negative) form, but such forms are generally very much hidden unless we consciously look for them.

❑ If they are found frequently and regularly, then the figure-ground relationship is reversible: at one moment we find positive forms and negative space, at another moment we find negative forms and positive space.



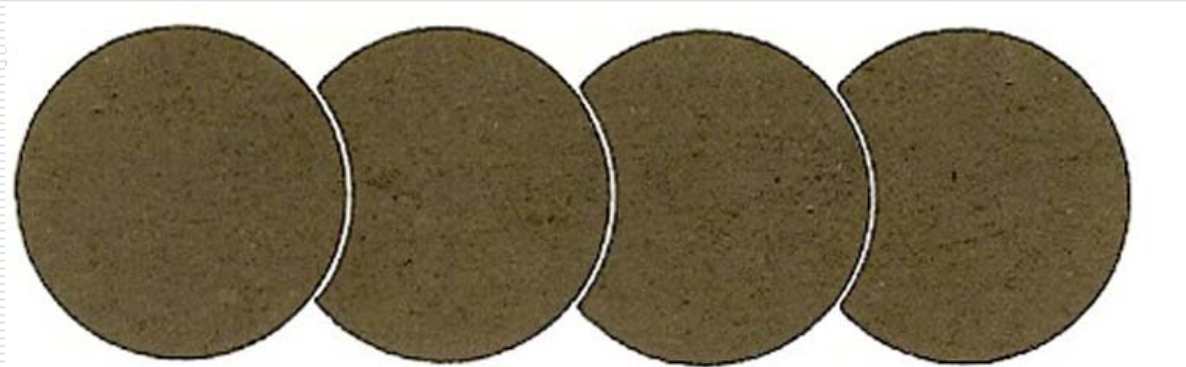
Flat and Illusory Space

In a flat space situation, forms can meet one another by touching, penetration, union, subtraction, intersection, coinciding, or just be in detachment, but they can never meet by overlapping.



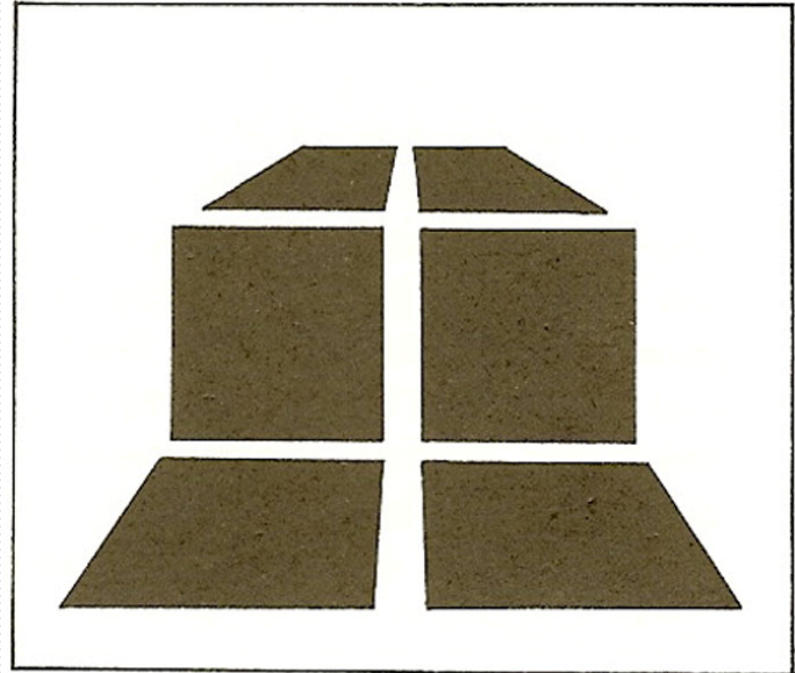
Flat and Illusory Space

- ❑ Overlapping suggests that one form is nearer to our eyes than another, thus rendering the space illusory to some extent.
- ❑ Variations in shape, size, color, and texture may also destroy the flatness of space, but this does not always happen.



Flat and Illusory Space

- ❑ Space is illusory when all the forms seem not to lie on or be parallel to the picture plane.
- ❑ Some forms may appear to advance, some to recede, some to present their frontal views, and some to show their oblique views.
- ❑ The forms themselves may be flat or three-dimensional.



Flat Forms in Illusory Space

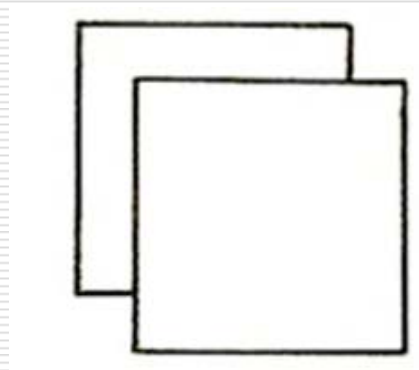
Flat forms in illusory space are like forms made of thin sheets of paper, metal, or other materials. The following are some common ways flat forms can be used in illusory space:

- a. Overlapping.
 - b. Change in size.
 - c. Change in color.
 - d. Change in texture.
 - e. Change in view.
 - f. Curving or bending.
 - g. Addition of shadow
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Flat Forms in Illusory Space

a. Overlapping

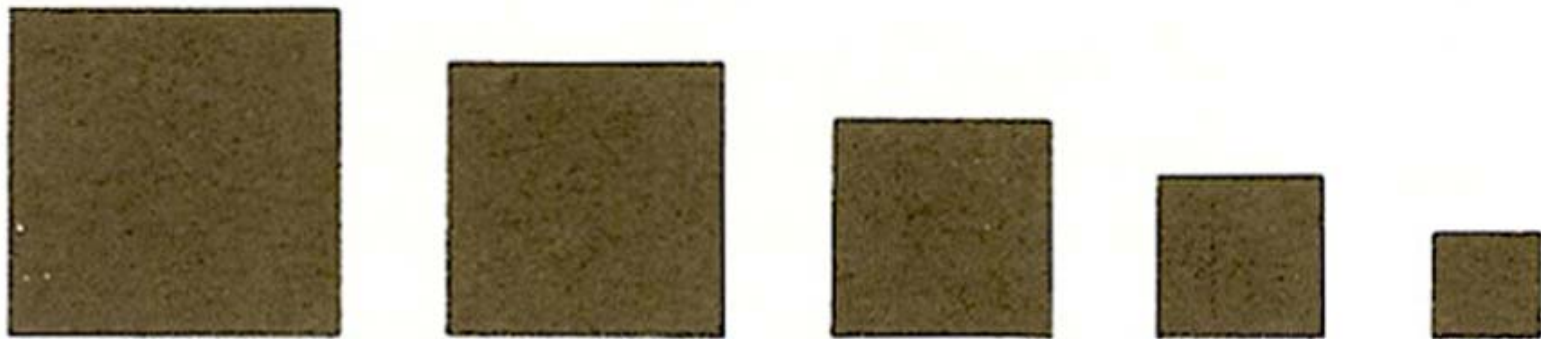
- When one form overlaps another, it is seen as being in front of or above the other.
- The flat forms may have no appreciable thickness at all, but if overlapping occurs, one of the two forms must have some diversion from the picture plane, however slight the diversion may be.



Flat Forms in Illusory Space

b. Change in size

- Increase in size of a form suggests that it is getting nearer, whereas decrease in its size suggests that it is farther away.
- The greater the range of change in size present in the design, the deeper is the illusion of spatial depth.



Flat Forms in Illusory Space

c. Change in color

- ❑ On a white background, darker colors stand out much more than lighter colors, thus appearing closer to our eyes. On a very dark background, the reverse is true.
- ❑ If both warm and cool colors are present in a design, generally the warm colors appear to advance whereas the cool ones recede.



Flat Forms in Illusory Space

d. Change in texture

Coarser textures normally appear closer to our eyes than finer textures.



Flat Forms in Illusory Space

e. Change in view

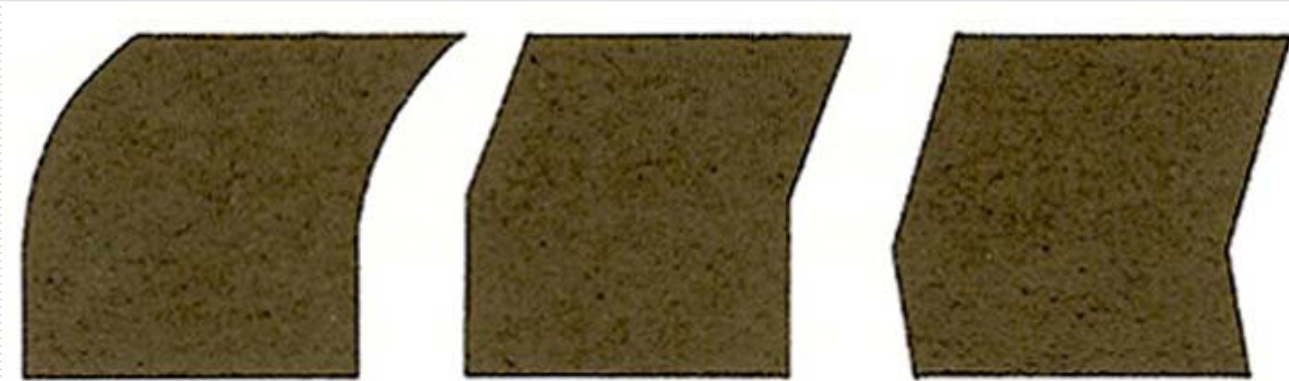
- A form is in full frontal view when it is parallel to the picture plane. If it is not parallel to the picture plane, we can only see it from a slanting angle.
- Change in view is a result of spatial rotation (see Chapter 6, section on spatial gradation), creating illusory space though not a very deep one.



Flat Forms in Illusory Space

f. Curving or bending

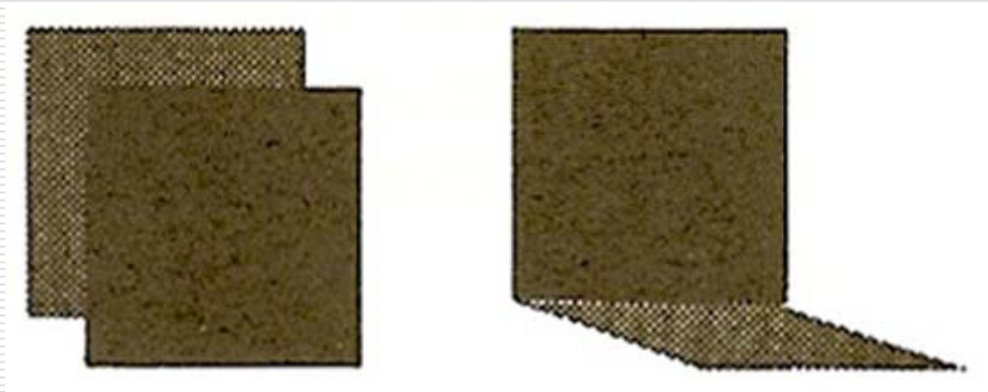
- ❑ Flat forms can be curved or bent to suggest illusory space.
- ❑ Curving or bending changes their absolute frontality and activates their diversion from the picture plane.



Flat Forms in Illusory Space

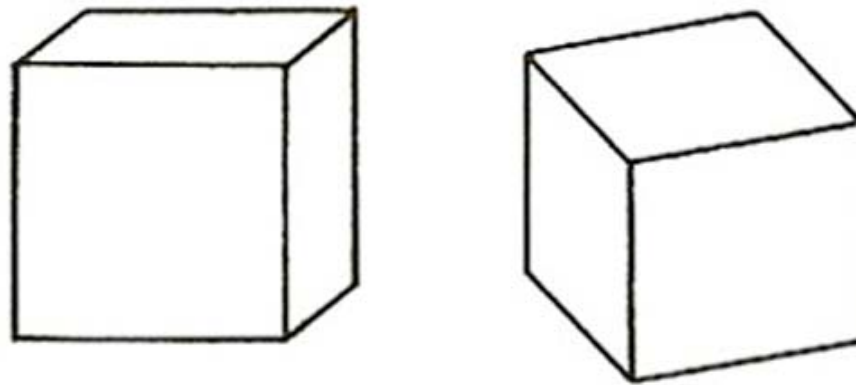
g. Addition of shadow

- ❑ The addition of a shadow to a form emphasizes the physical existence of the form.
- ❑ The shadow may be cast in front of or behind the form, linked to or detached from it.



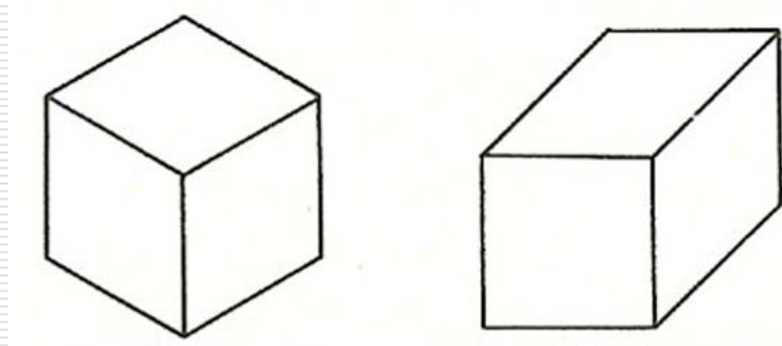
Volume and Depth in Illusory Space

- All flat forms can become three-dimensional forms in illusory space with the suggestion of thickness, which just requires supplementary views added to the frontal view.
- As a three-dimensional form is not always seen in full frontality, there are many angles and points of view from which it can be seen and represented on a flat surface convincingly.



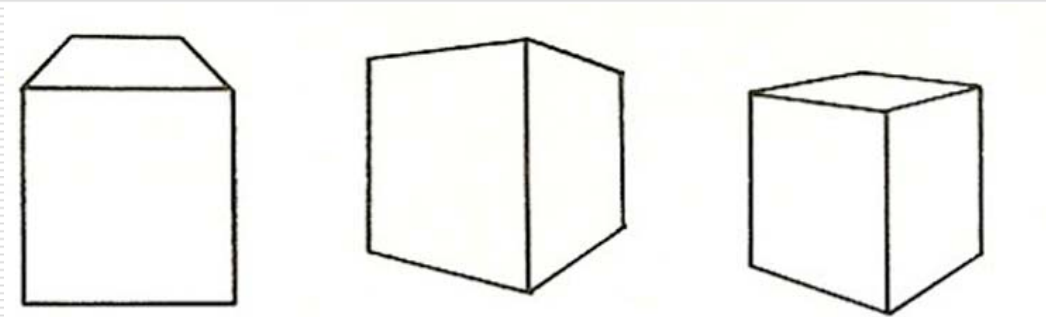
Volume and Depth in Illusory Space

There are isometric and other systems of projection in the representation of volume and depth.



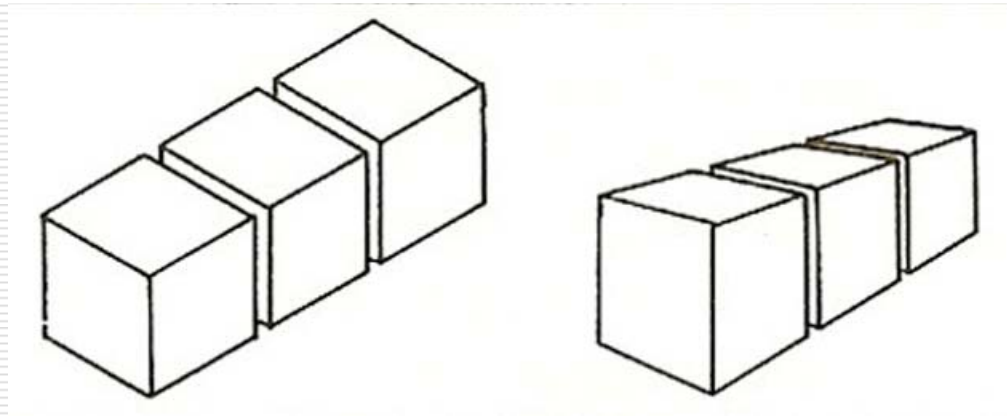
Volume and Depth in Illusory Space

- ❑ There are also laws of perspective by means of which we can depict volume and depth with a surprising degree of realism.
- ❑ If we have to represent a cube that has six equal edges meeting each other at right angles, simple systems of projection maintain the equality of the edges and angles to some extent, but perspective which gives a more convincing picture renders most of the equal elements unequal.



Volume and Depth in Illusory Space

When a series of cubes is to be represented with one behind another, no decrease in size of the cubes is shown with the various systems of projection, but a gradational decrease in size is shown with perspective.



Plane Representation in Illusory Space

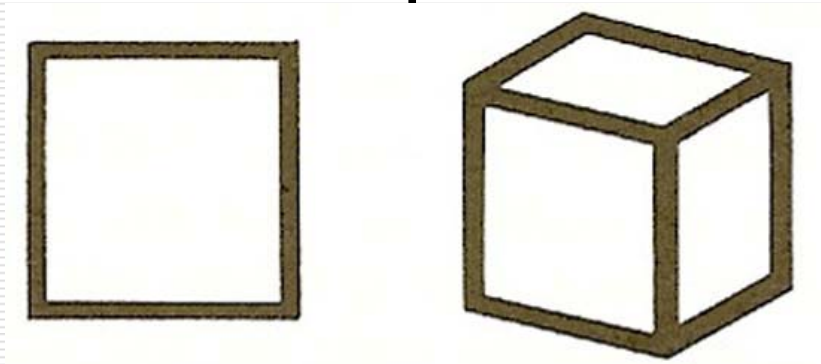
Volume is contained by planes which can be represented in various ways:

- a. Outlined planes.
- b. Solid planes.
- c. Uniformly textured planes.
- d. Gradationally colored or textured planes.

Plane Representation in Illusory Space

a. Outlined planes

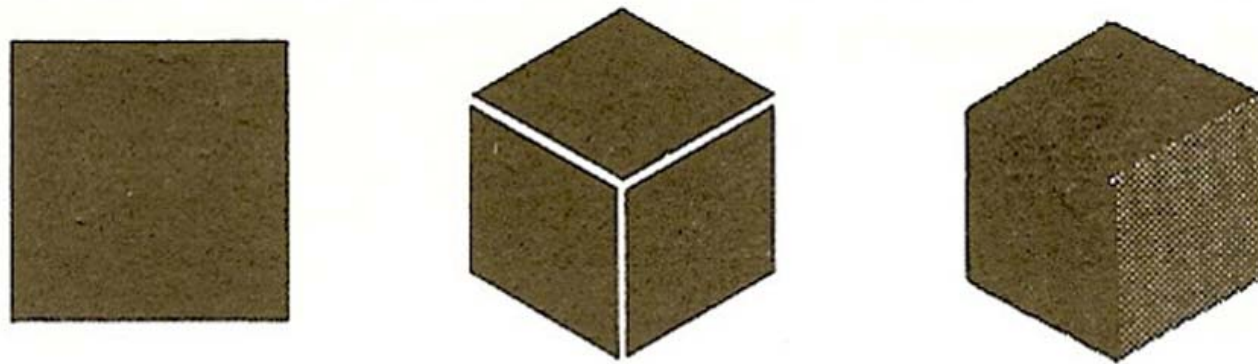
- ❑ Planes can be outlined, and the designer may choose any thickness of line for his purpose.
- ❑ Outlined planes in illusory space are usually represented as opaque planes: we cannot see what is behind them.
- ❑ If they are represented as transparent planes, then they may become more like spatial frames.



Plane Representation in Illusory Space

b. Solid planes

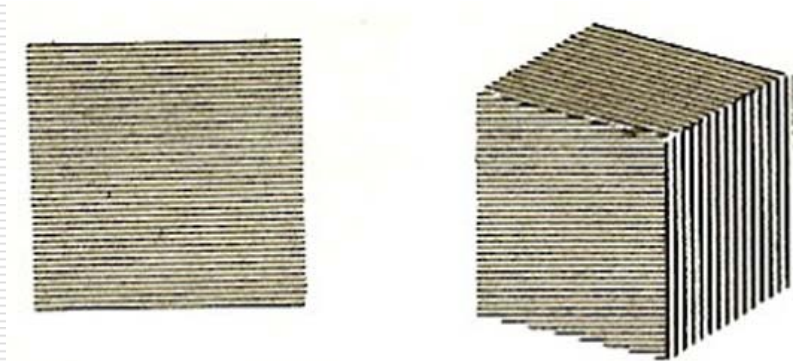
- These are planes without ambiguity.
- Solid planes, if they are of the same color, can be used as flat forms to suggest illusory depth, but it is difficult for them to work together to suggest volume.
- Solid planes with color variations can represent volume with great effectiveness.



Plane Representation in Illusory Space

c. Uniformly textured planes

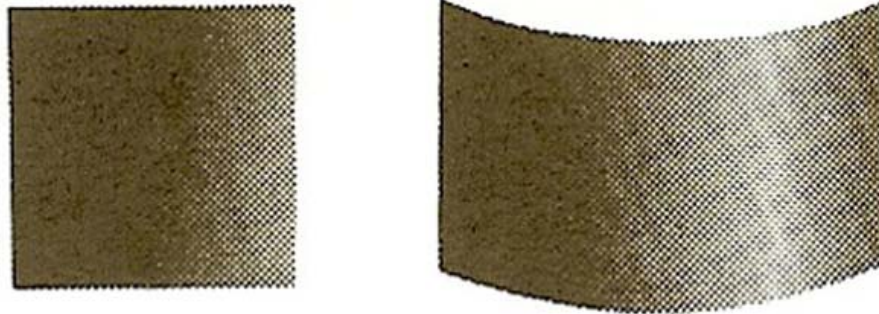
- A uniformly textured plane is distinguishable from another which it adjoins or overlaps even if the texture of the two planes is the same.
- This is because the textural pattern of one plane does not have to spread continuously to the plane adjacent to it.
- Certain kinds of texture have strong directional feeling which can give emphasis to planes that is not seen frontally but sideways.



Plane Representation in Illusory Space

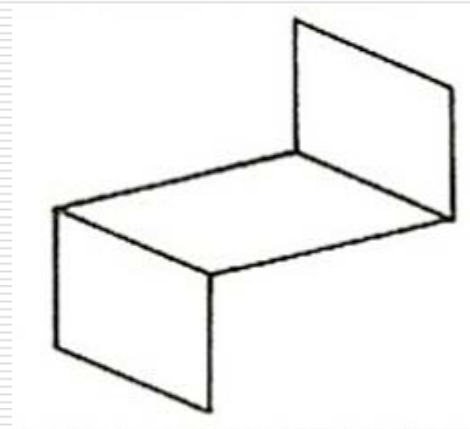
d. Gradationally colored or textured planes

- Gradationally colored or textured planes have a different effect in the creation of spatial illusion.
- They suggest light and shadow patterns or metallic sheens on surfaces, thus enhancing realism to some extent.
- They are particularly effective in the representation of curved surfaces.



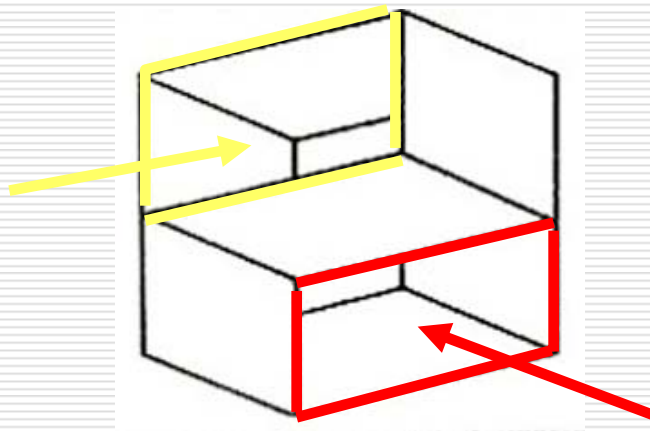
Fluctuating and Conflicting Space

- Space fluctuates when it appears to advance at one moment and recede at another moment.
- We have already mentioned a kind of simple fluctuating situation when we discussed positive and negative space and reversible figure-ground relationships earlier in this chapter

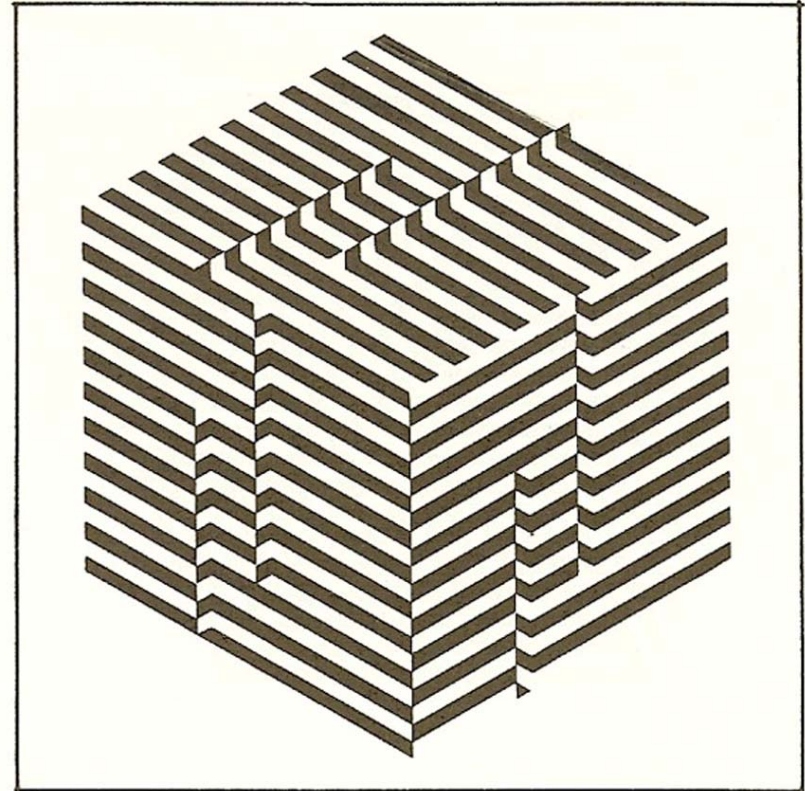
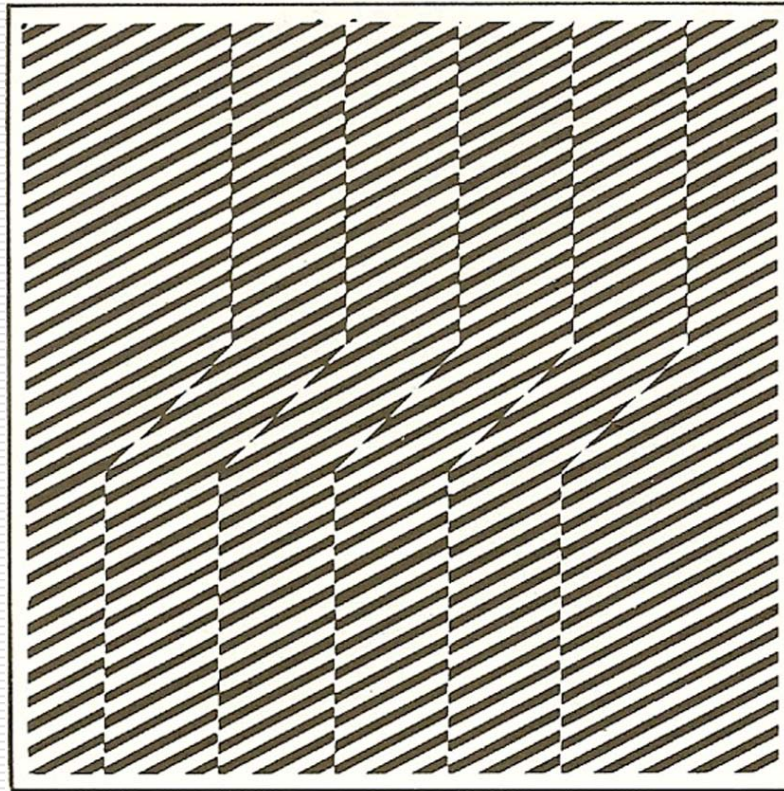


Fluctuating and Conflicting Space

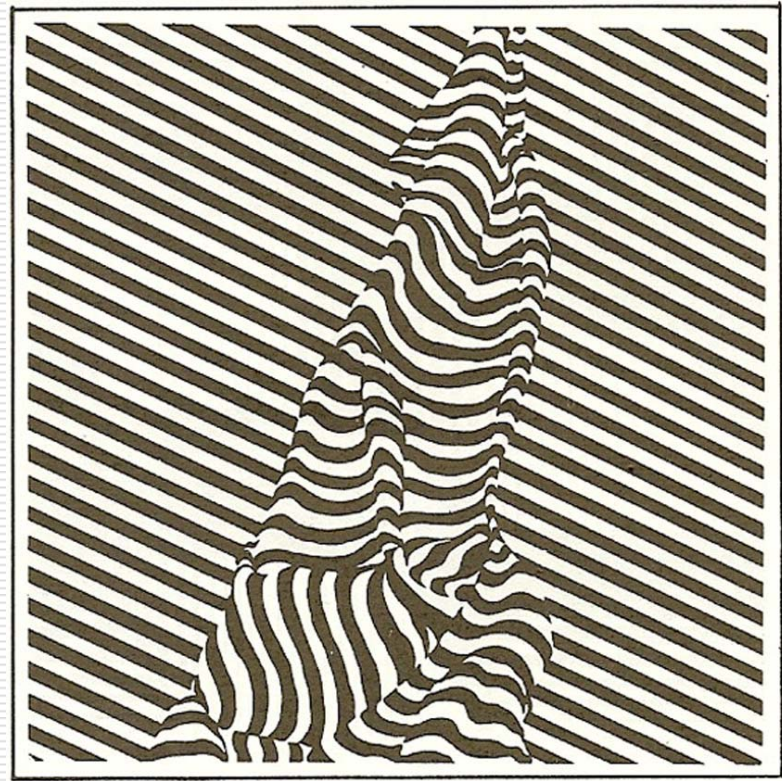
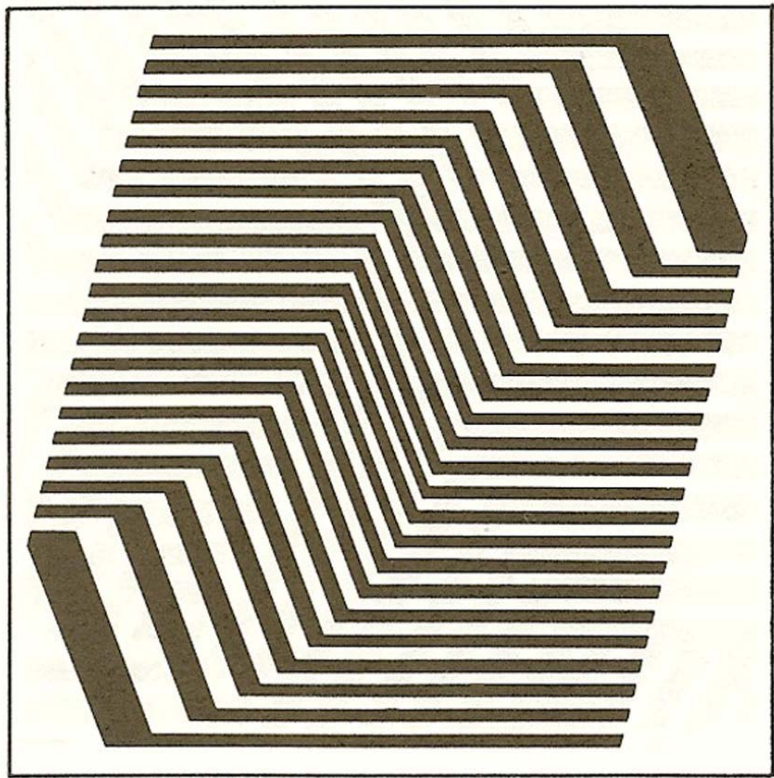
- ❑ In conflicting space, we feel we are definitely looking down if we only see one part of the design, and we feel we are definitely looking up if we only see another part of the design.
- ❑ However, when the design is seen as a whole, the two visual experiences are in serious conflict with each other and cannot be reconciled.



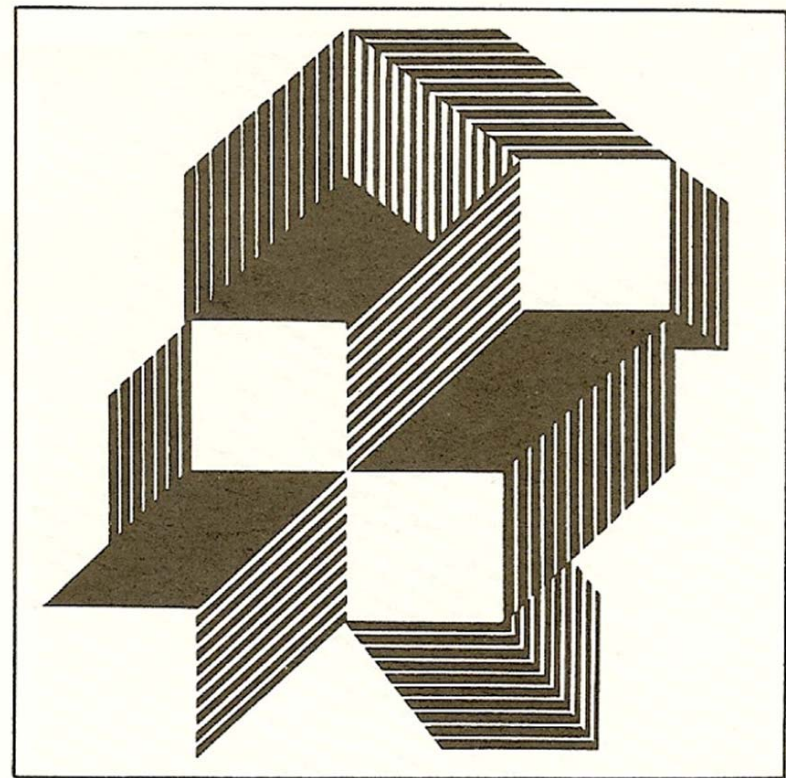
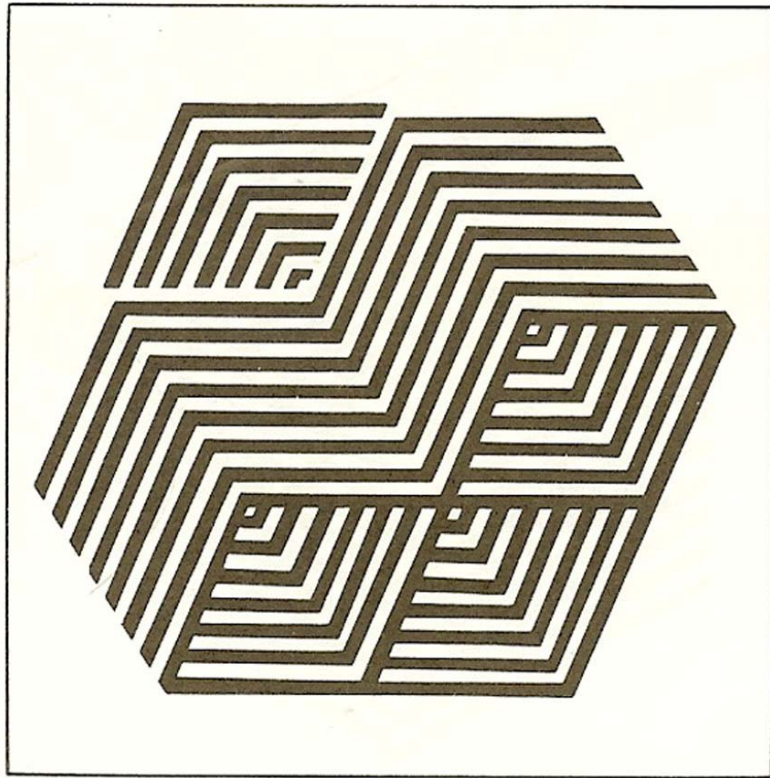
Exercises



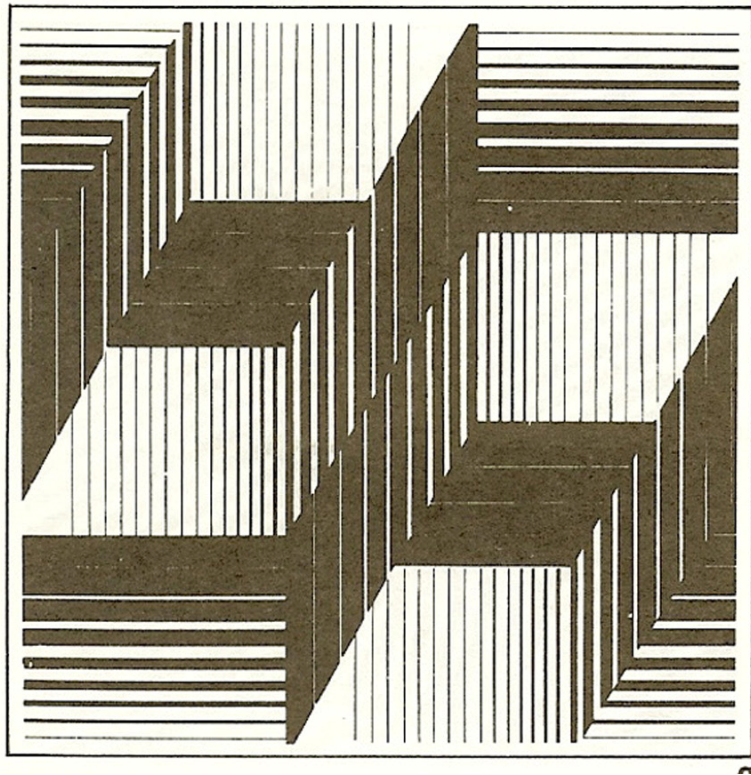
Exercises



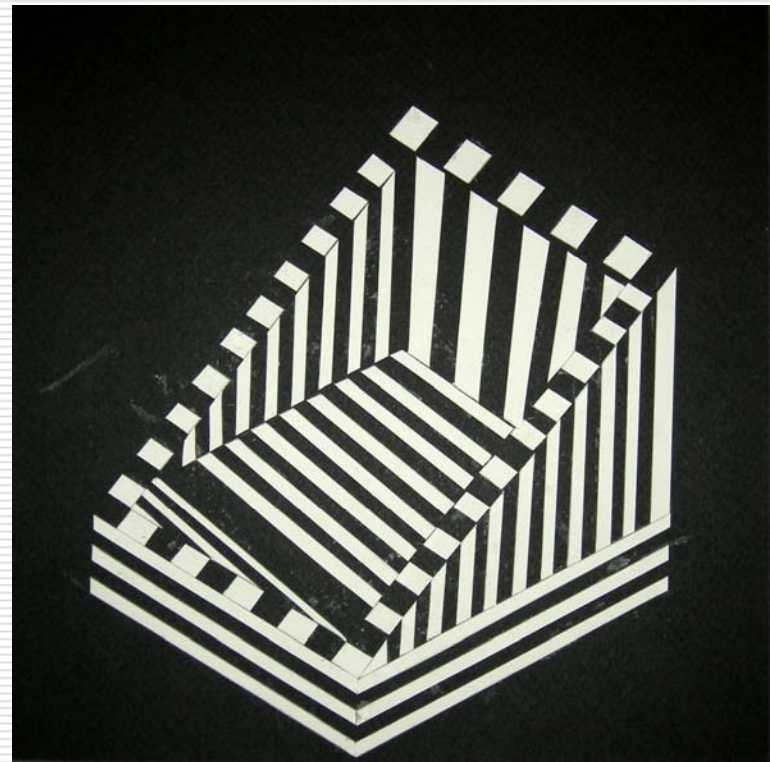
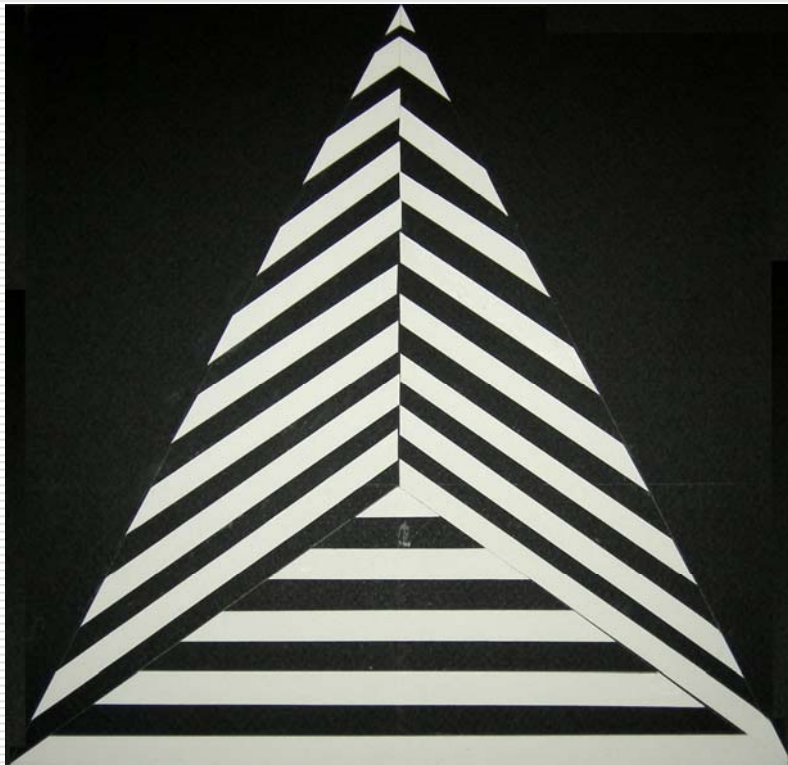
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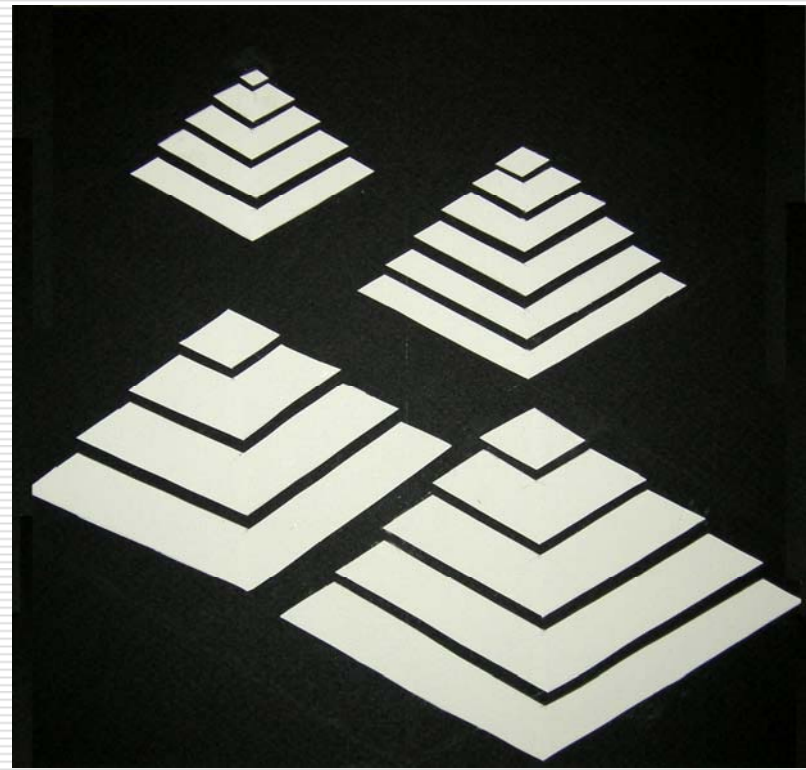
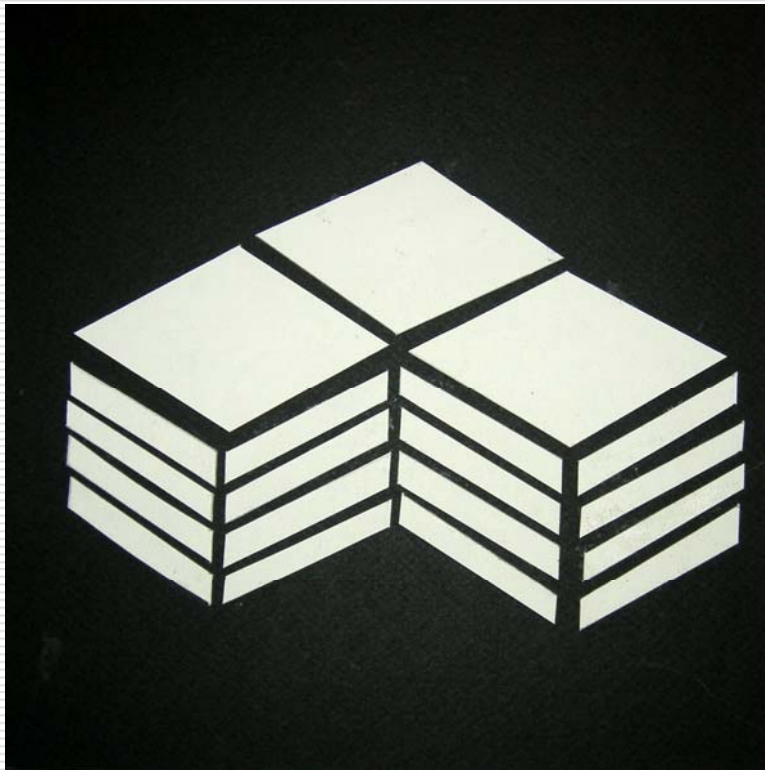
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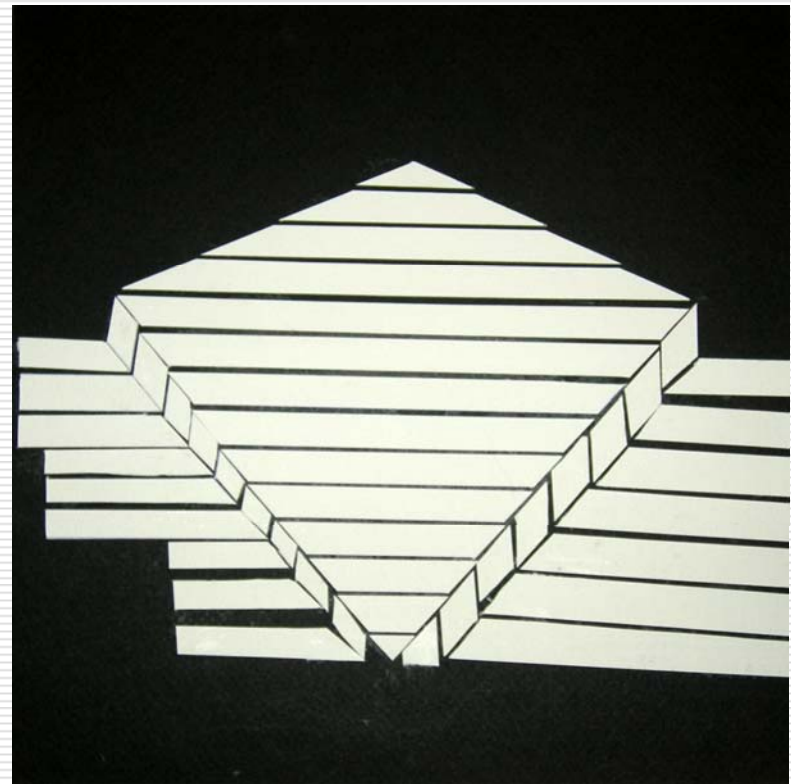
Examples



Examples



Examples



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