

Mini-Course in Design Principles

This course is designed as a complement to the line-study problems and it is taught during the second semester. Simple exercises based on a variety of design principles using cut paper or brush and plaka are done outside of class. To keep focus on process, cut paper and a restricted format are specified. Black and white plaka are used for sketching with a brush in a very loose, free manner. This encourages student exploration while examining numerous options before finalizing an image.

Students need to expand design experiences, acquire design vocabulary, and at the same time, to identify and understand theoretical design principles in a broader sense than found in the line and shape exercises.

Depending on how much time we have, or how slowly or quickly students progress with line-studies, we sometimes do compositions. This is a substitution when we did not have time to do research and design for an animal, bird, reptile, insect, etc. One year we did still-lives using fruits and vegetables. Other years we did compositions based on a profession or an activity. On two occasions, one section did a composition based on Alaska while the other section did a composition based on Arizona.

Complexity of the composition problems is based on time parameters and an estimate of student capabilities. It was obvious that students understood very little about composition, and without criteria, they experienced great difficulty in organizing elements into a composition.

While the line-study sequence has always been extremely effective, it has always concerned me that there were so many aspects of design composition that were dealt with indirectly, and compositional tools and criteria needed to be more strongly emphasized.

When students enter the basic design program, they are predominantly content-oriented with emphasis on representational imagery. The principal objective for basic design is to make students perceptually aware and better able to see visual qualities as well as content. They should learn to view any image – including representational, as an abstraction. It is important that they understand visual criteria and how theoretical principles relate to practical design. Knowing design principles does not in itself make a good designer – it is how they are applied that determines quality.



Sequence of Exercises

- 1 Dynamic and Static Composition
- 2 Defining Space through Placement
- 3 Defining Space through Scale and Value
- 4 Illustrating Two Shapes as One, as Two or in Tension
- 5 Tension Relationships
- 6 Tension to Achieve Visual Balance
- 7 Preserving Integrity of Shape with Tension
- 8 Figure-Ground as Tension
- 9 Activating Ground with Shape
- 10 Activation of Figure and Ground to Create Multiple Planes
- 11 Maximum Activation of Ground with Minimum of Figure
- 12 Composition of Tension Lines Illustrating Space and Activating the Picture Plane
- 13 Contrast of Size and Surface
- 14 Division of a Square into Intervals of Line and Shape
- 15 Line Intervals to Define Planes
 - A a flat plane receding into space
 - B a curvilinear plane showing form
- 16 Organization and Establishing Priorities
- 17 Final Project: Composition Illustrating Application of Principles

Instructions

Most exercises will be done with two-inch black squares unless stated otherwise; squares cannot touch or overlap unless specified; and all work is to be done on bristol board inside a ten-inch square delineated with a rapidograph pen. At completion of the course, there will be a progress book for the design principles. Exercises can be reduced 50% and placed two to a page.

There will be a sheet opposite illustrations which identifies the principle and a separate paragraph that explains the student's understanding of the principle. The language should be about the same as that which would be used to explain the principle to parents, or someone totally removed from design.

Students need to understand that meeting problem objectives in itself is not enough – the image is expected to be visually interesting. Work will be judged on the basis of visual interest as well as demonstration of understanding the principle.

It recently has become clear that students pay little attention to how work is pinned up and this becomes one more area for learning. What is bottom and what is top is often very critical to the visual presentation. Many times they pin up work that would be much stronger turned upside down or on its side. Students should be required to mark top with a small arrow on all the exercises.

Students benefit from doing the exercises is dependent on individuals utilizing the process for exploring options to the maximum. If students do only one interpretation to put up for class critique, learning will be minimal, and perhaps, even a waste of time for both student and teacher. Students need to either pin the work on the wall and stand back to study it as they plan their next option, or to lay work on the floor and stand to evaluate it before trying an alternative. Success of the program is tied to students working in good faith – that is that they are conscientious in exploring options.

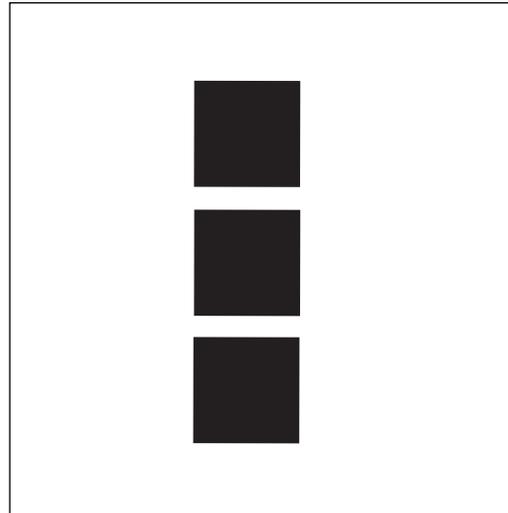
1 Dynamic and Static Composition

Although this problem is done with squares, the same principles might apply to illustrations, photographs, type or any other visual elements. Some compositions might include both static and dynamic arrangements. What is important is to recognize which is which and to know when to use one or the other or when to mix them.

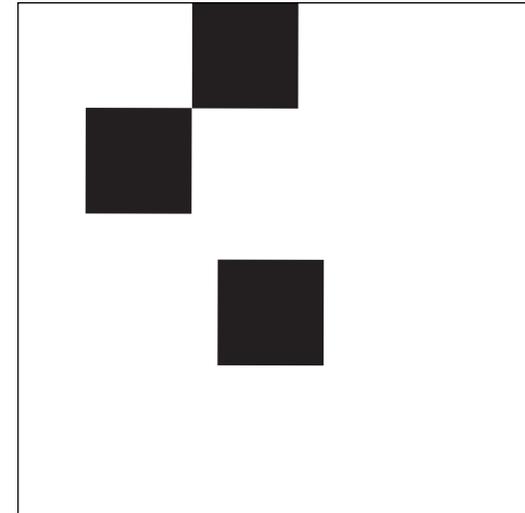
Simple demonstration problem to help students better understand what is meant by dynamic and static relationships. Also to help students better understand the role of picture plane edges as part of the composition.

- A Using three squares, demonstrate a static composition.
- B Using three squares, demonstrate an active composition.

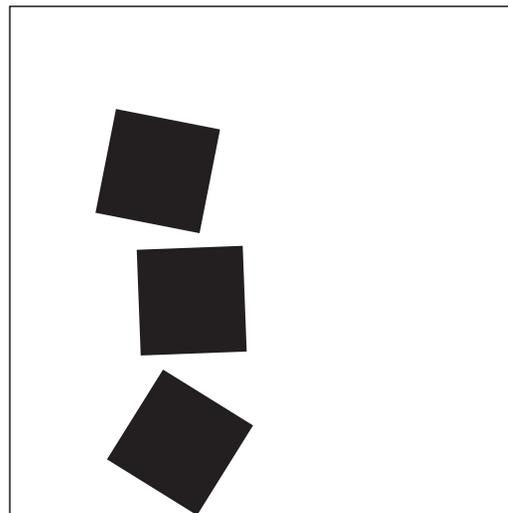
It is not only how squares relate to edges, but it is also that the organization of squares themselves must be either dynamic or static.



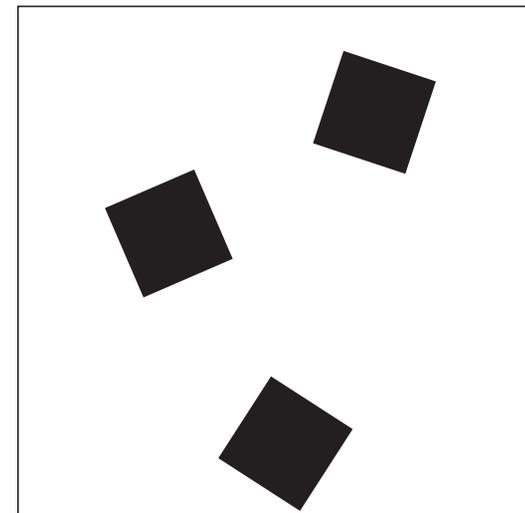
Exercise A



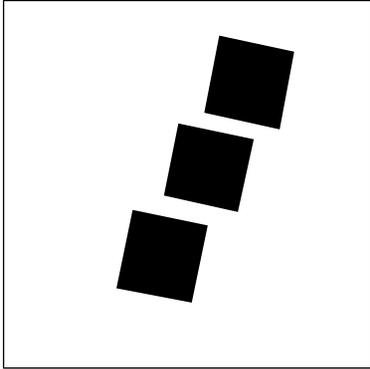
Exercise A



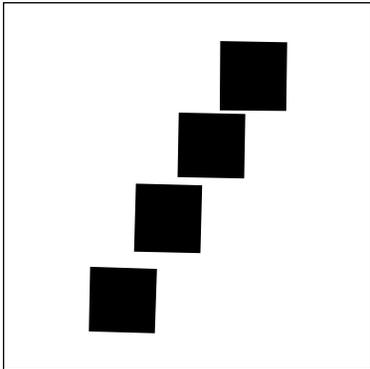
Exercise B



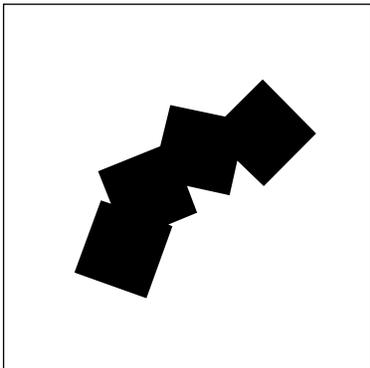
Exercise B



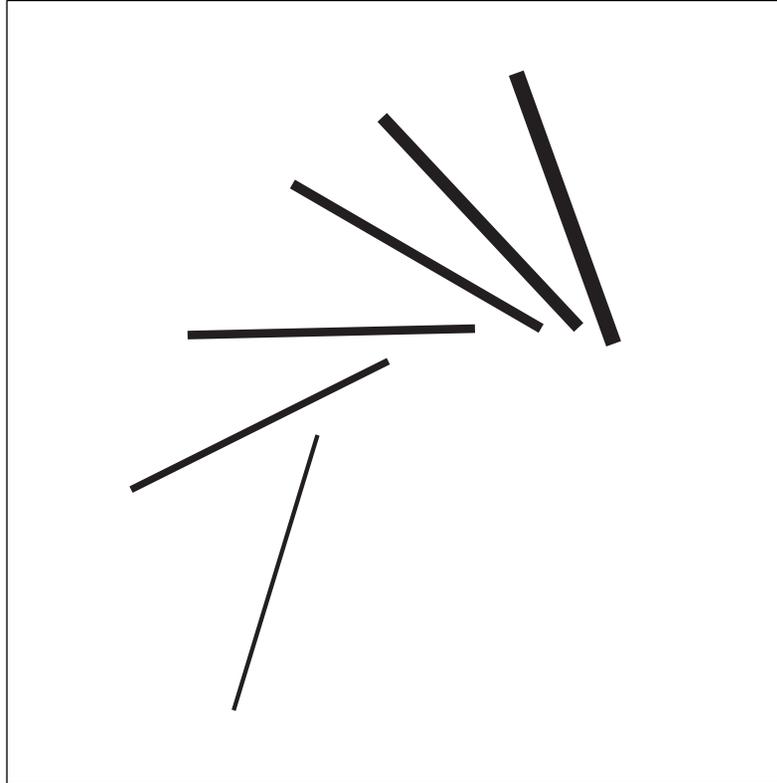
Exercise A



Exercise A



Exercise A



Exercise B

2 Defining Space through Placement

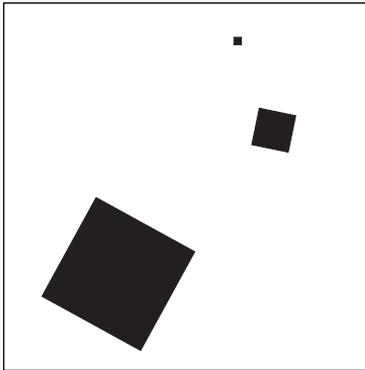
The next few exercises deal with the illusion of space, depth or multiple spatial planes. The objective is to distinguish between distance as between elements on the surface plane or depth through different spatial planes. Another illusion of space is dimension as seen in three-dimensional objects that occupy and therefore define space. It is very important in design to understand all the nuances of depth, space and dimension.

To help students better understand how space can be defined by the placement of elements. To illustrate how positioning and interval relate to the illusion of space.

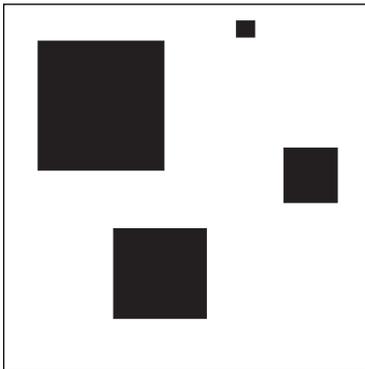
- A Using three or four two-inch squares, demonstrate spatial definition through placement of the squares, relationship of corners, interval, and overlapping are all considerations.
- B Using four or six four-inch lines, create an illusion of space.

3 Defining Space through Scale and Value

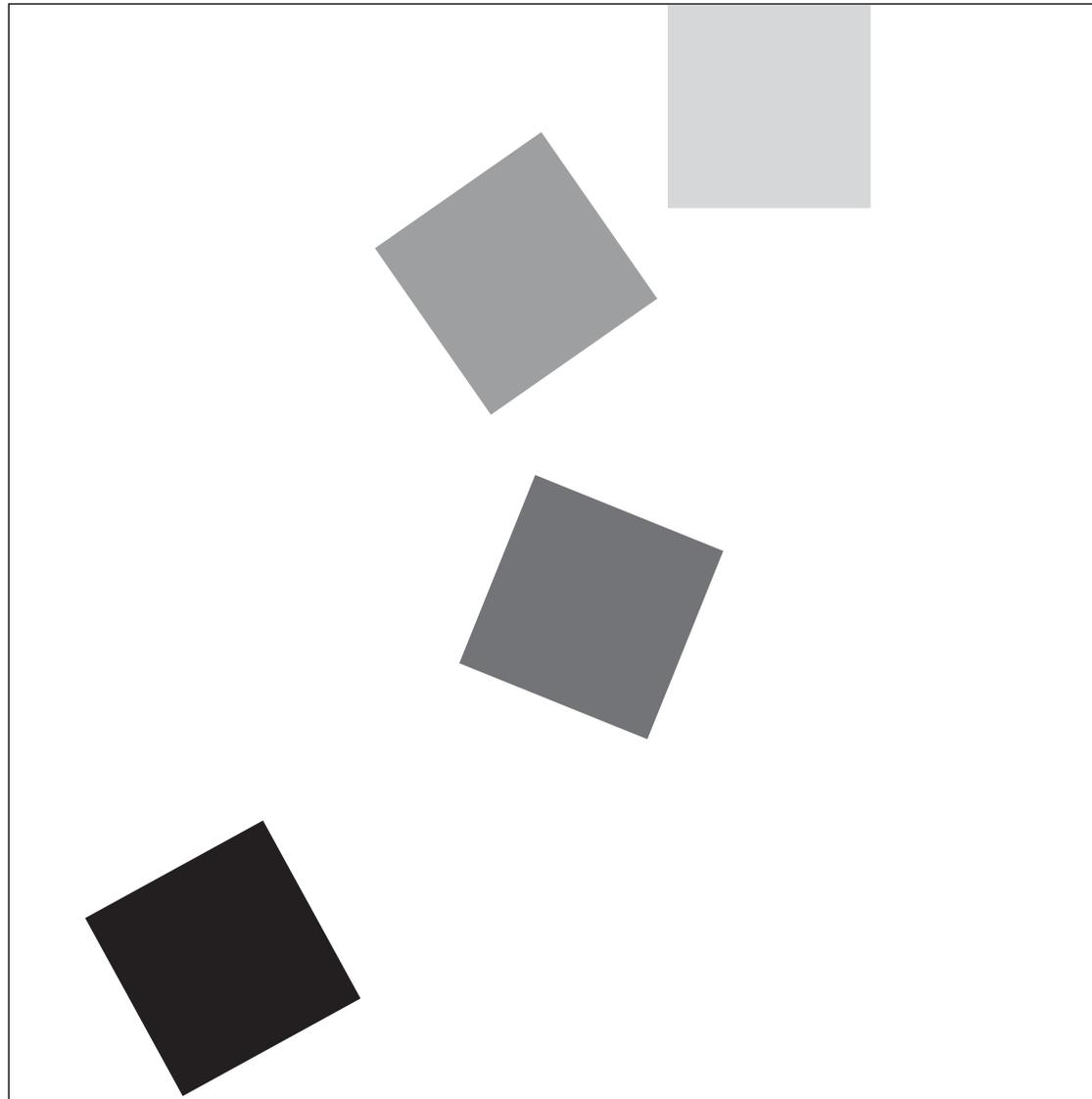
- A Using no more than four squares of varying dimensions, show space using scale. Exaggeration of small to large creates the most dramatic effect.
- B Using four squares of varying values of gray to black create a spatial composition.



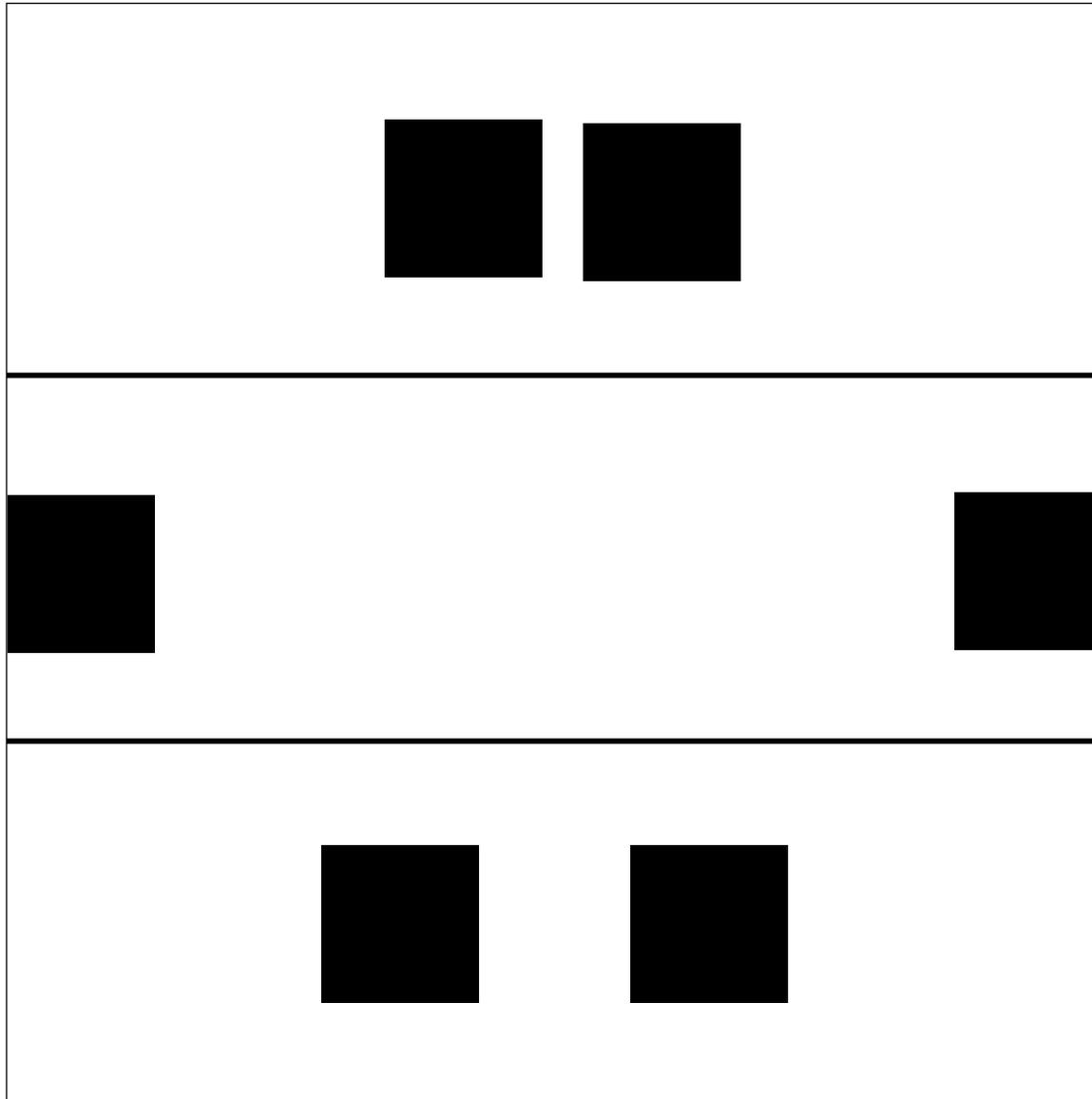
Exercise A



Exercise A



Exercise B



Exercise 4

4 Illustration Two Shapes as One, as Two or in Tension

The next series of exercises has to do with different manifestations of tension. Tension is a very important design tool that has numerous interpretations. An old painter once described tension as *a very important something between two points where there is nothing*.

Tension exists in color, drawing, relationship of shapes, and it is extremely important in any kind of composition – typographic or otherwise. Tension is a principle that is manipulated for numerous effects or purposes. As such, it is one of the most important design tools a designer can exploit. It is essential to recognize and to know how to use tension.

Divide the 10 x 10 inch picture plane horizontally into thirds with lines using a rapidograph pen.

Top section: two squares placed next to one another to appear as one shape.

Middle section: move the squares to opposite edges to read as two shapes.

Bottom section: slide the square back and forth until you find that exact point where it cannot be determined if it is one or two shapes – that will be the tension point.

5 Tension Relationships

Using one four-inch black square* and one linear unit** $\frac{1}{8} \times 3\frac{1}{2}$ inches make three arrangements – either static or dynamic:

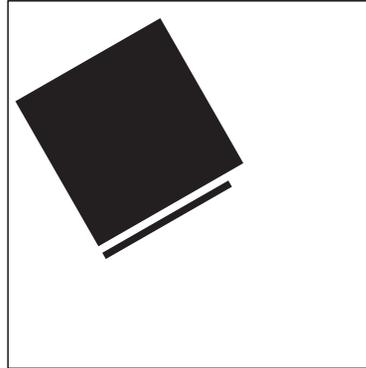
- A Relate linear unit to square as one shape.
- B Put linear unit into tension relationship with square.
- C Make linear unit and square two separate entities that are visually related.

$\frac{1}{8}$ -inch strip must align with left side of the larger square in all three exercises.

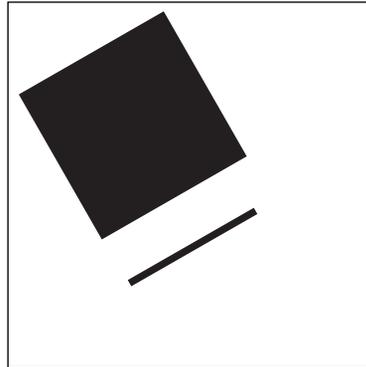
The purpose of this exercise is to demonstrate how captions can relate to photograph, illustration or any other element. This is of particular importance because too many designers do not recognize the importance of the visual dynamics of this relationship.

* May use four-inch square from a photograph.

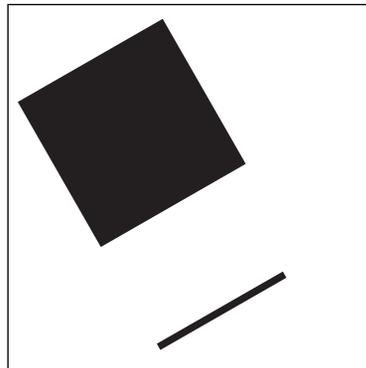
** May use a line of 10 point type.



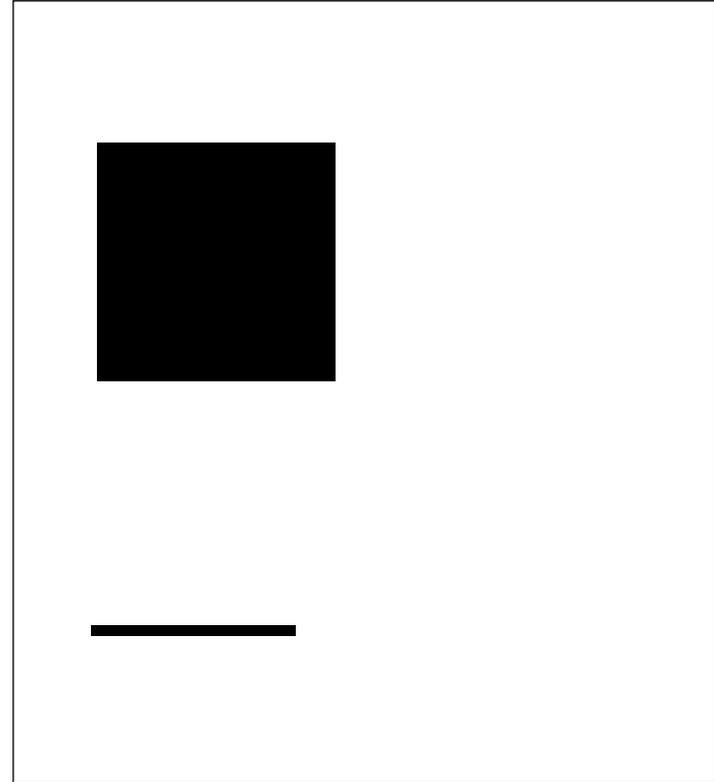
Exercise A



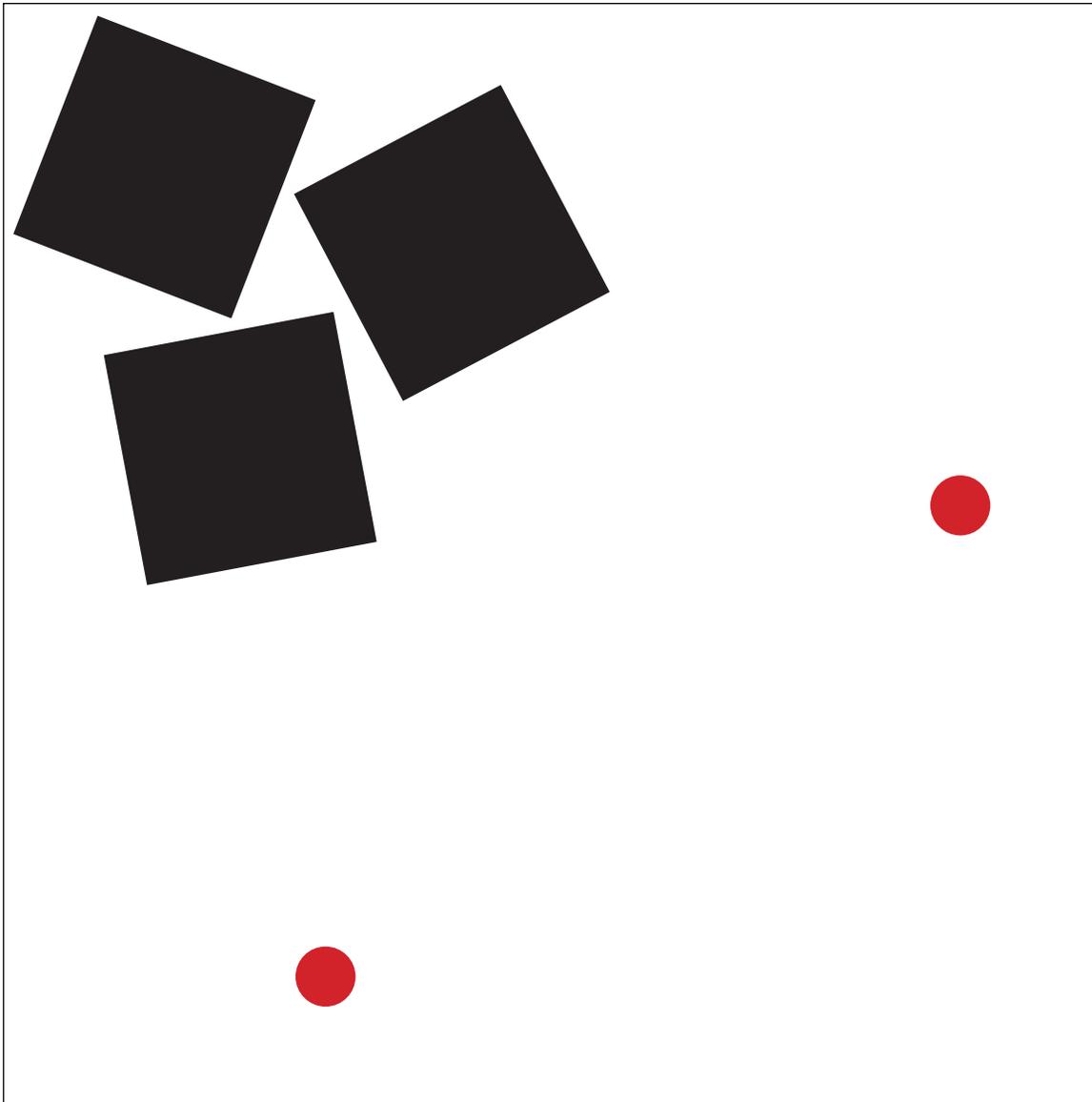
Exercise B



Exercise C



Exercise C

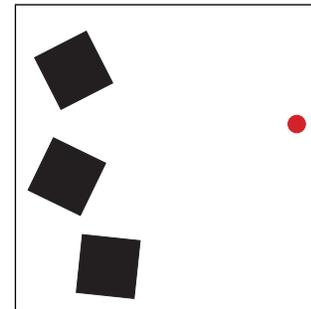


Exercise B

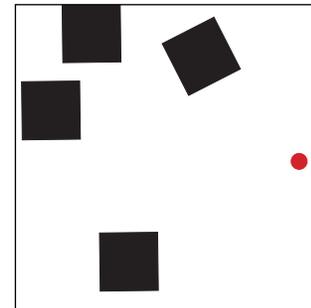
**6 Tension to Achieve
Visual Balance**

Using three squares and one 1/2-inch red circle, activate the entire ten-inch picture plane using tension. Arrange squares into an unbalanced format, and then create a visual balance using the red dot; at the same time, activating the entire picture plane. It works best if the red dot is slid up or down the edges.

- A Using one red dot
- B Using two red dots
- c Optional: You can use dots and three lines of type.



Exercise A



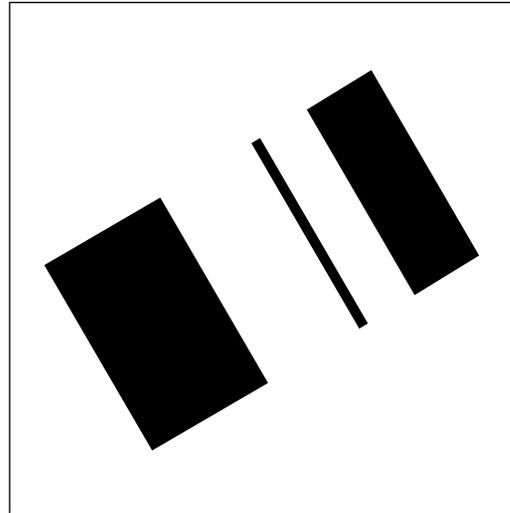
Exercise A

7 Preserving Integrity of a Shape with Tension

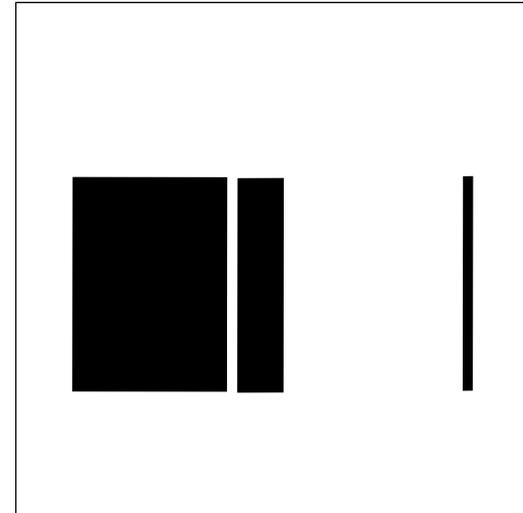
A four-inch black square is cut vertically into three sections, one of which will be one-eighth inch wide, and the other cuts are made at the student's discretion.

Squares can be placed in either a static or dynamic relationship to the edges. Sections can be rearranged.

The sections are slid back and forth to find the greatest amount of tension between the sections. Top and bottom edges must always align with all sides parallel. The objective is to retain the integrity of the three shapes as one shape through tension.



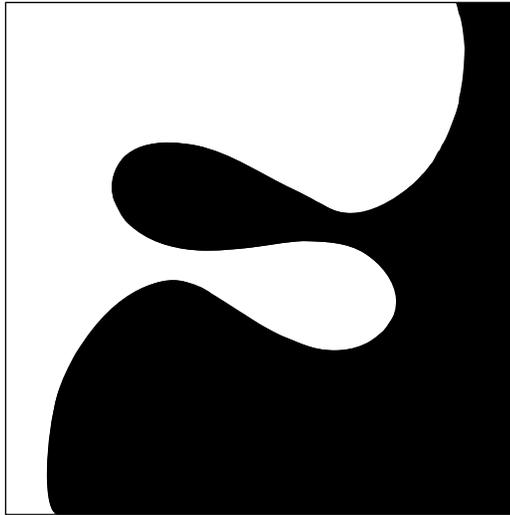
Exercise 7



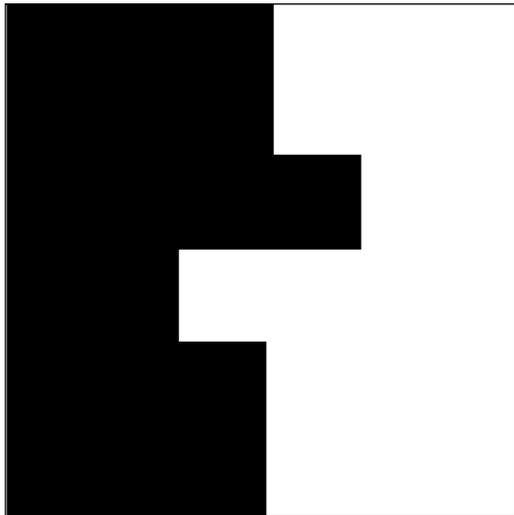
Exercise 7



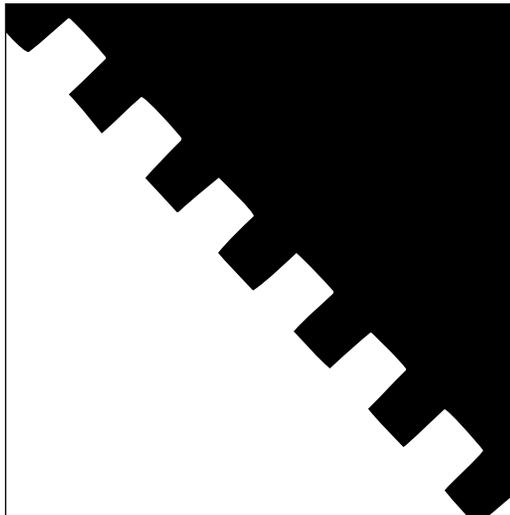
Exercise A



Exercise A



Exercise A



Exercise B

8 Figure-Ground as Tension

Explain to students how and why ambiguity is a form of tension.

- A Using cut paper or plaka, create figure-ground tension through shape. Fill entire four-inch picture plane.
- B Using cut paper or plaka, create figure-ground tension as pattern. Fill entire four-inch picture plane.

Fill entire four-inch picture plane.

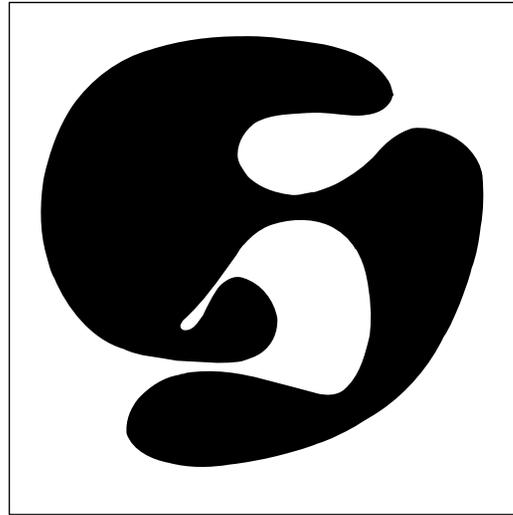
The illusion of figure-ground requires equal amounts of black and white, and the illusion is enhanced by contours – some form of interlocking with black and white shapes identical.

9 Activating Ground with Shape

The manipulation of ground and shape into visually ambiguous shapes is at the heart of most trademark design. The tension between figure and ground is a significant factor in the designing of letterforms.

The interactional relationship between figure and ground is perhaps the most effective tool in the designer's visual repertory.

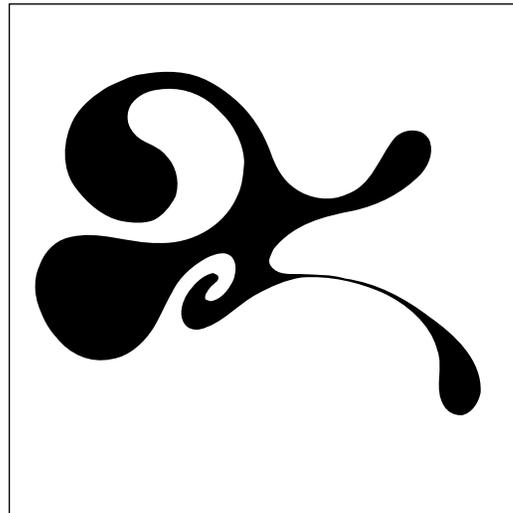
Using cut paper or brush and plaka, make a shape where the field can be read on two or more planes. The shape should be esthetically pleasing, in proportion with the ten-inch square and be visually centered. You should be able to read white on black on black on white on black ...



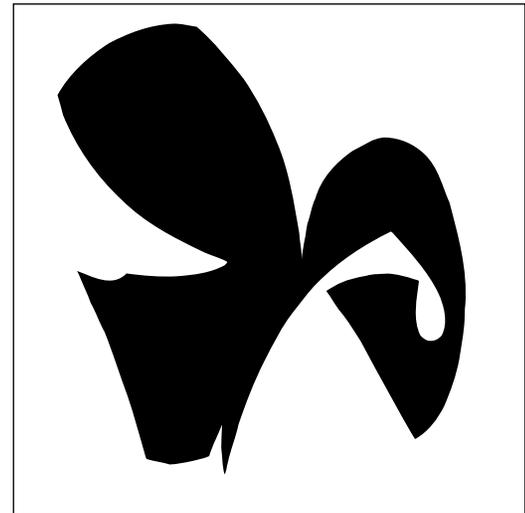
Exercise 9



Exercise 9



Exercise 9



Exercise 9

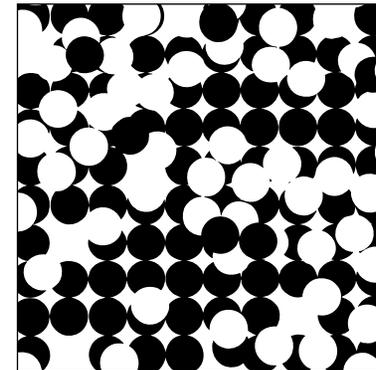


Exercise B

10 Activate Figure and Ground to Create Multiple Planes

This exercise extends the figure-ground principle into spatial planes rather than as a shape, and this is of importance to fine artists as well as designers.

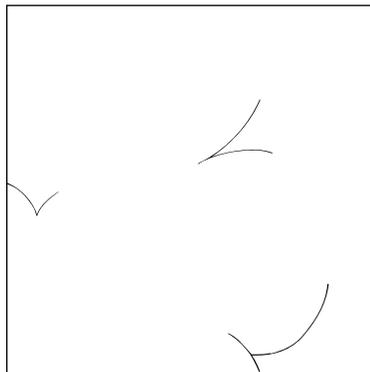
- A Using one-inch circles cut from black and from white paper, create a visually interesting composition illustrating as many spatial planes as possible. Must be a visually interesting composition. It is suggested to begin with a grid lightly drawn in pencil.
- B With cut or torn black and white papers, create a composition based on multiple spatial planes. Must be a visually interesting composition.



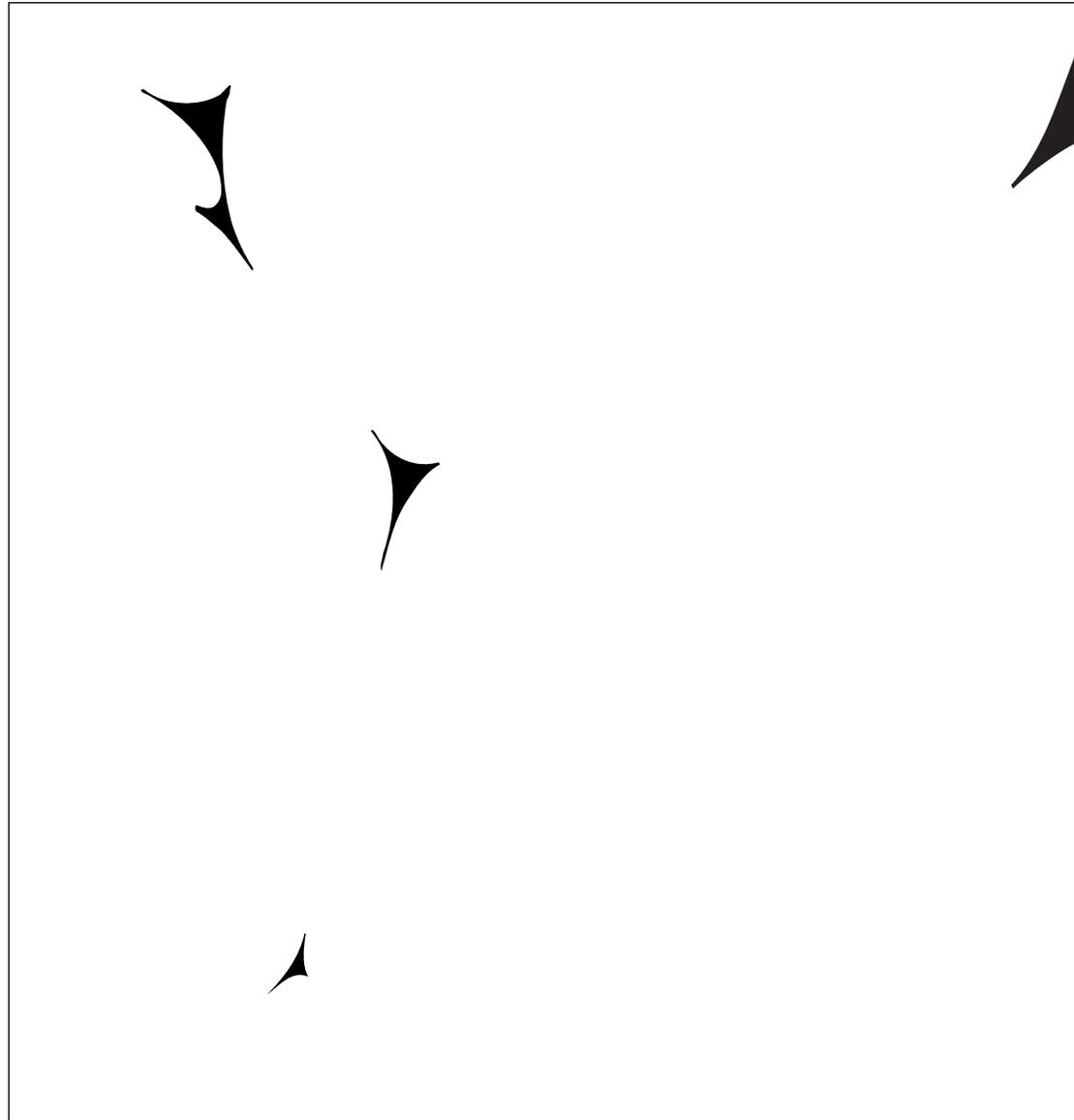
Exercise A

**11 Maximum Activation
of Ground with
Minimum of Figure**

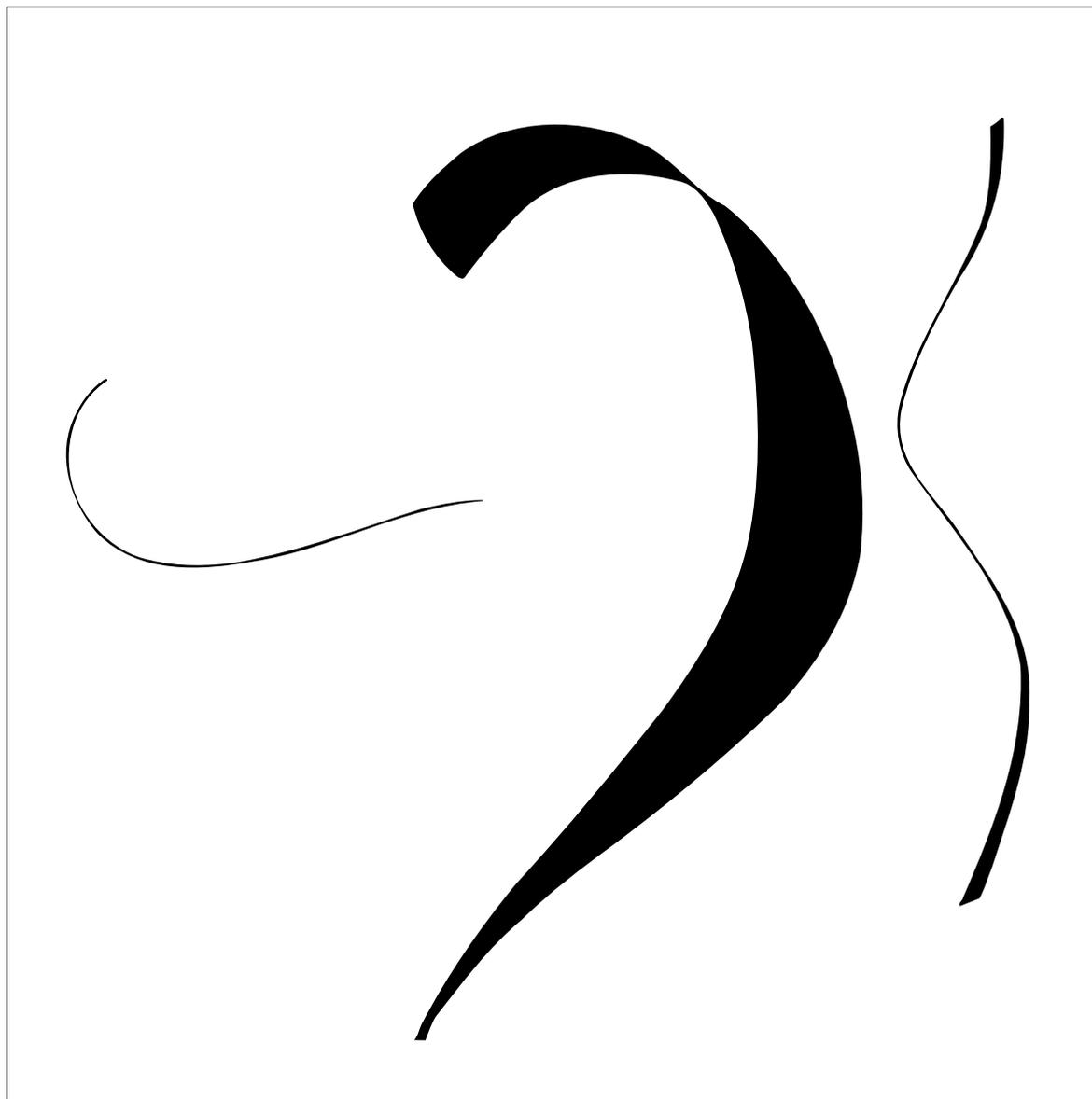
Activate the picture plane with a minimum of image. With a brush and plaka or rapidograph pen, indicate interstices in a stone wall or a bed of river rocks. Minimal drawing to activate maximum space. Must be a visually interesting composition. Scale and tension will have a great deal to do with success in this exercise.



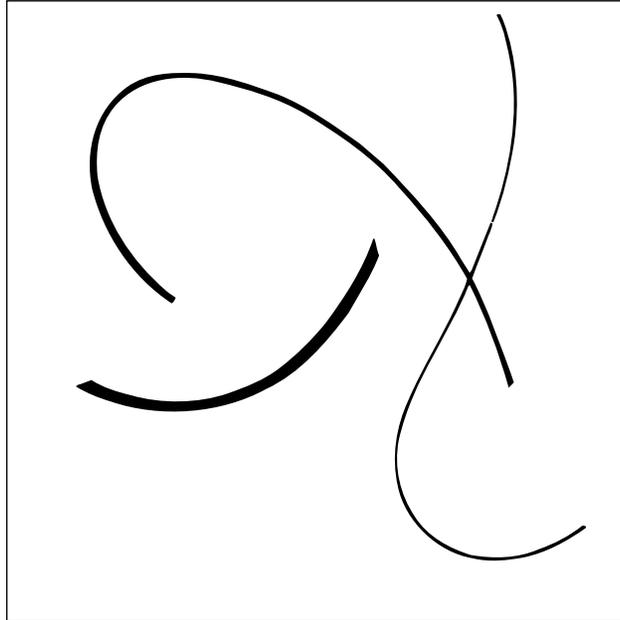
Exercise A



Exercise B



Exercise 12



Exercise 12

12 Composition of Tension Lines Illustrating Space and Activating the Picture Plane

In design and drawing we often refer to lines as *having tension*. Tension lines always result in a more dynamic image. This is a good opportunity to explain to students that tension lines are based on intent, i.e. no flat curves, smooth transitions between line segments. A tension line does not necessarily have to be a hard, polished line, – the line can be soft or even ragged or fuzzy and still have tension.

Draw and present three lines with each line being a tension line.

Lines can be of different weights and lengths but must be lines and not shapes. At least one of the lines must have rough edges such as dry-brushed – however, there must be tension in the line! The lines should form a composition that activates the picture plane and shows the illusion of depth.

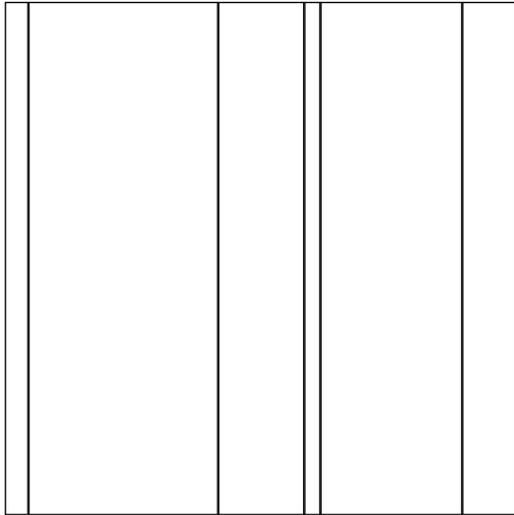
Arrange lines to activate space in a visually interesting way within the ten-inch picture plane. Use brush and plaka and/or rapidograph pen. One solution required.

13 Contrast of Size and Surface

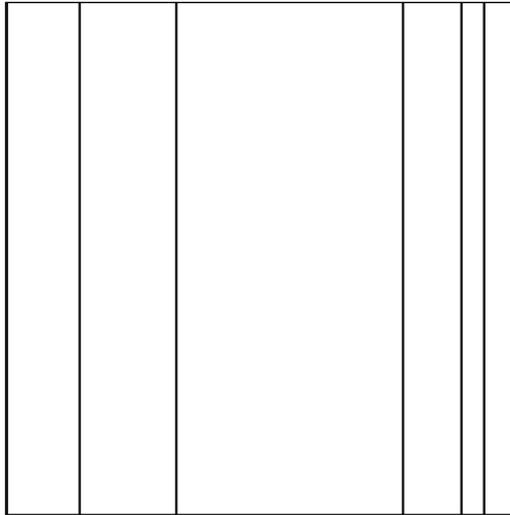
Contrast is a more general principle. It basically involves using contrasting qualities for visual interest – big to small, textured to smooth, hard to soft, red to green, black to white, straight to curve, fat to thin, long to short, etc. Contrast is either similar to, or interacts with many of the other principles such as scale, interval, how much to how much, etc.

Contrast is a form of visual dynamics and a valuable design tool. Two problems are given here, but students should be aware of broader applications for contrast.

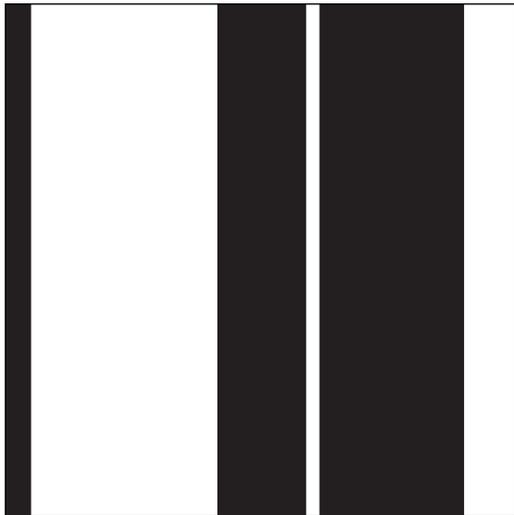
- A A ten-inch composition using squares and contrast of size for visual interest.
- B A ten-inch composition using two-inch squares with various surfaces to create visual interest.



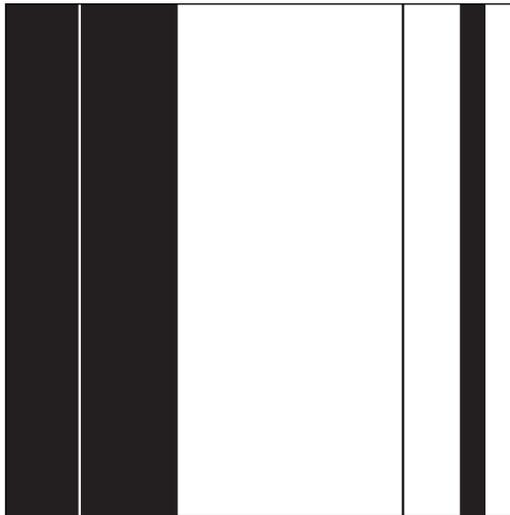
Exercise A



Exercise A



Exercise B



Exercise B

14 Division of Square into Intervals of Line and Shape

Intervals occur in numerous aspects of design, and they are always deserving of consideration. The intervals dealt with in these exercises are spatial intervals. The idea is to be aware of the visual effects between different intervals, such as interval overlaps, *how much to how much*, tension and contrast principles, and others.

The general concept is to make visually interesting distinctions and groupings, and this most is often done through contrast.

- A The first exercise is a six-inch square divided into intervals with five vertical lines. The intervals between lines is the consideration.
- B The second exercise is a copy of the first with some intervals filled in as shapes. Intervals between lines and shapes is the consideration.

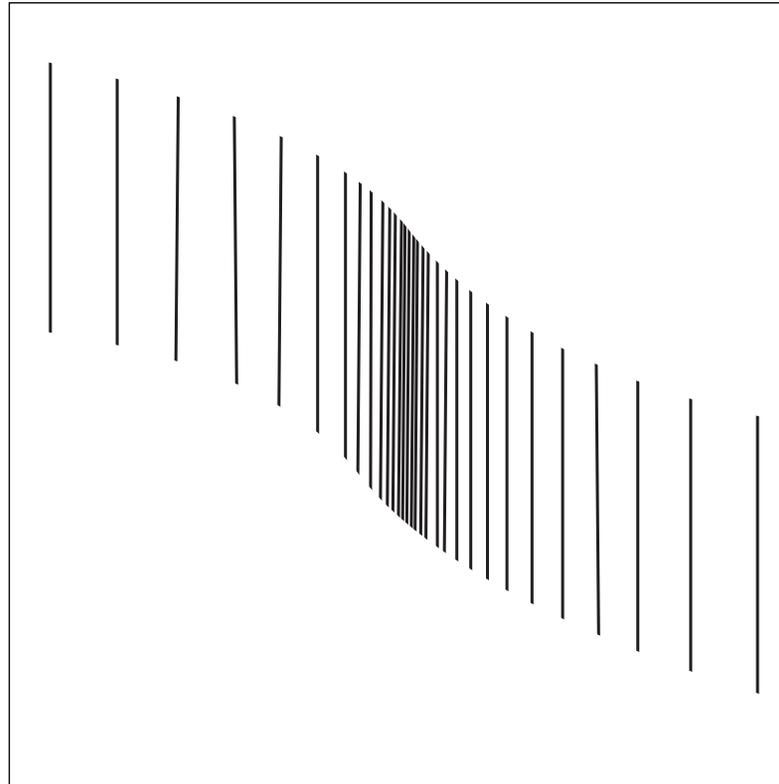
15 Line Intervals do Define Planes

Intervals that progressively increase and diminish create the illusion of space or depth whether lines or shapes are the elements. Intervals are a factor in other principles such as placement or scale.

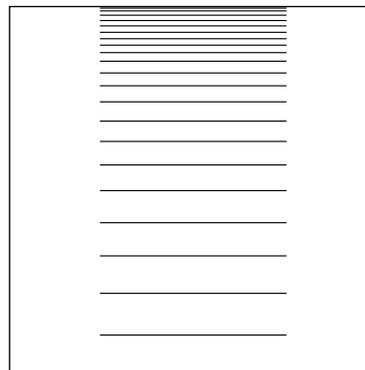
Using a straight edge and rapidograph pen, draw six-inch horizontal lines that progressively increase and decrease the intervals between lines. On the first exercise, the first interval is $\frac{3}{4}$ inch and succeeding intervals decrease to the smallest possible interval. If the progression is faulty, the plane breaks. The illusion is a flat plane receding into space.

The second exercise, intervals diminish and increase progressively creating the illusion of an undulating ribbon. The illusion is enhanced by using two parallel undulating lines.

The visual effect should be a continuous surface that recedes and returns. If the interval proportions are incorrect, the surface plane will appear to be broken.



Exercise 15



Exercise 15

16 Organization and Priorities

On a 12 x 12 inch board, make a collage with a cut-paper square, circle, triangle, and add four curved or straight lines; a block of text at least six inches deep, a letterform at least three inches high, a photograph of a plane, car or ship, a headline, a trademark, a signature, a human figure (can be a photograph) and do a composition establishing priorities and organization. One color in addition to black may be used.

The objective is to compose the diverse into an orderly composition. This is done by establishing priorities, scale and placement.

17 Final Project: Composition Illustrating Application of Principles

Design a cover for the 8 1/2 x 11 inch presentation booklet using as many of the design principles as possible. Imagery can be drawn from any of the work done throughout the entire year. The words *Basic Design* must be incorporated into the design. Lettering is to be done by hand and reflect what was learned in the Letterform course.

There will be periodic pin-up of roughs for critique and discussion.



Alternate Final Project

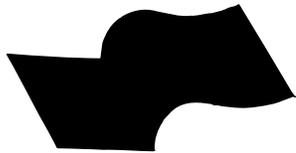


Alternate Final Project

Book Format

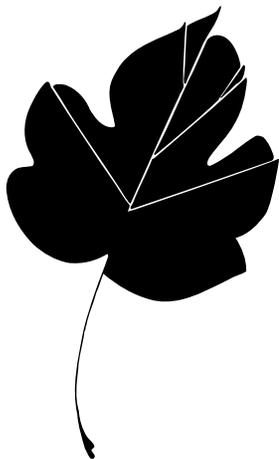
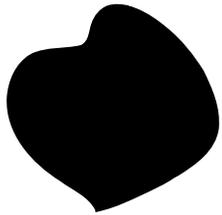
The first page of the book will repeat the words *Basic Design* and students will sign their name.

I will provide copy for all the exercises, and students will make copies and arrange the appropriate exercise next to the image. Each student will make two books – one to turn in at reviews and the other for their own use.



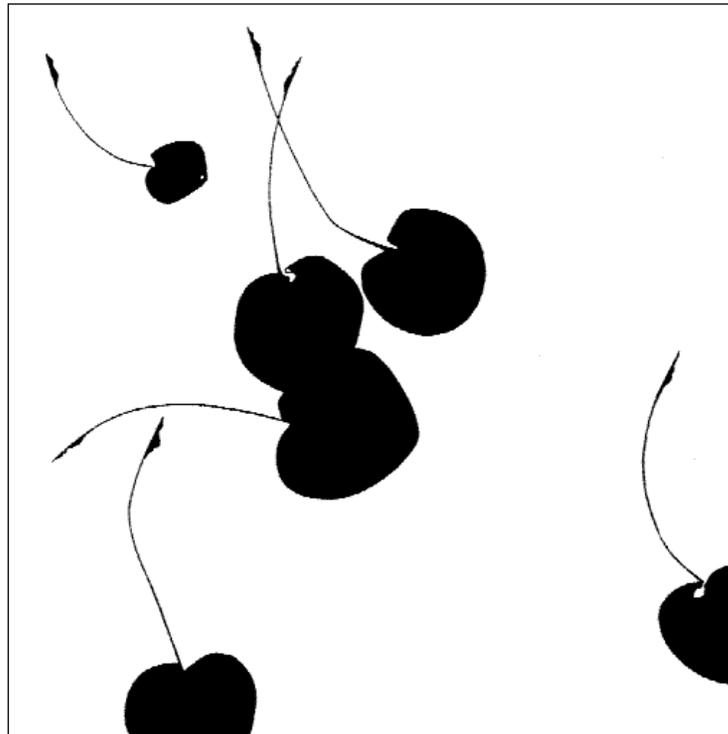
**1 Line and Shape
First Semester**

- A The four lines
- B The four line composition
- C The composition as shape and line
- D The composition as shape and line with color for one black or white shape.
- E The composition in five colors



**2 Line and Shape
Second Semester**

- A Simple flat shape
- B Complex dimensional shape
- C Folded paper shape
- D Leaf shape
- E Fruit or vegetable shape
- F Composition using no less than three and no more than four shapes.



3 All Work from Principles Class

- A Examples of Basic Design Exercises.
- B Theoretical and/or applied flat and dimensional shapes.
- C Composition combining at least three shapes from the preceding exercises.

This work is representative of what was done in the basic design class at the same time students were doing the principles. Flat shapes such as the non-biased abstract shape and leaf; and folded paper, abstract shape and fruit or vegetable to illustrate dimensionality through contour. The majority of illustrations are simple compositions using a minimum of three shapes chosen from previous exercises.