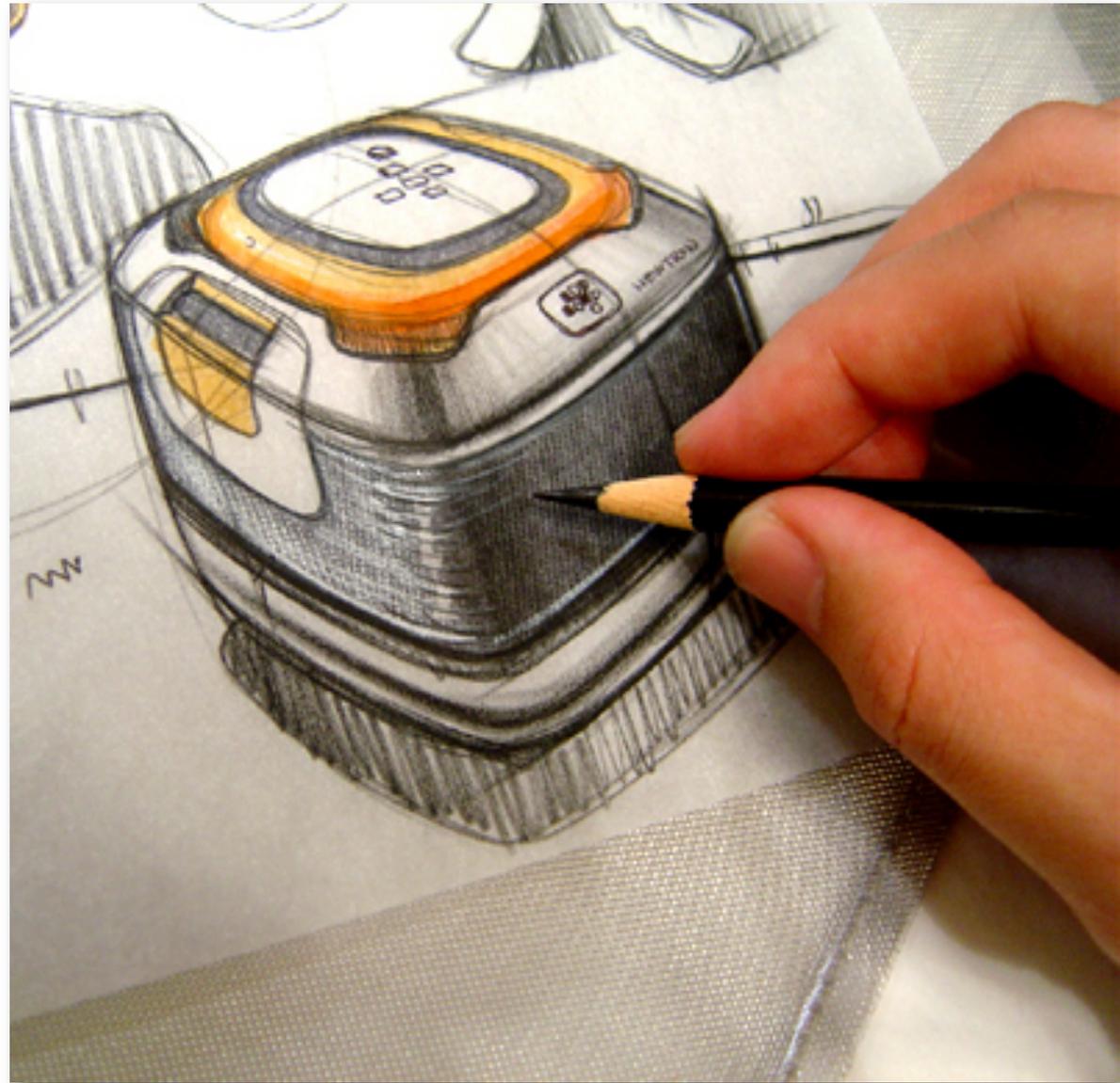


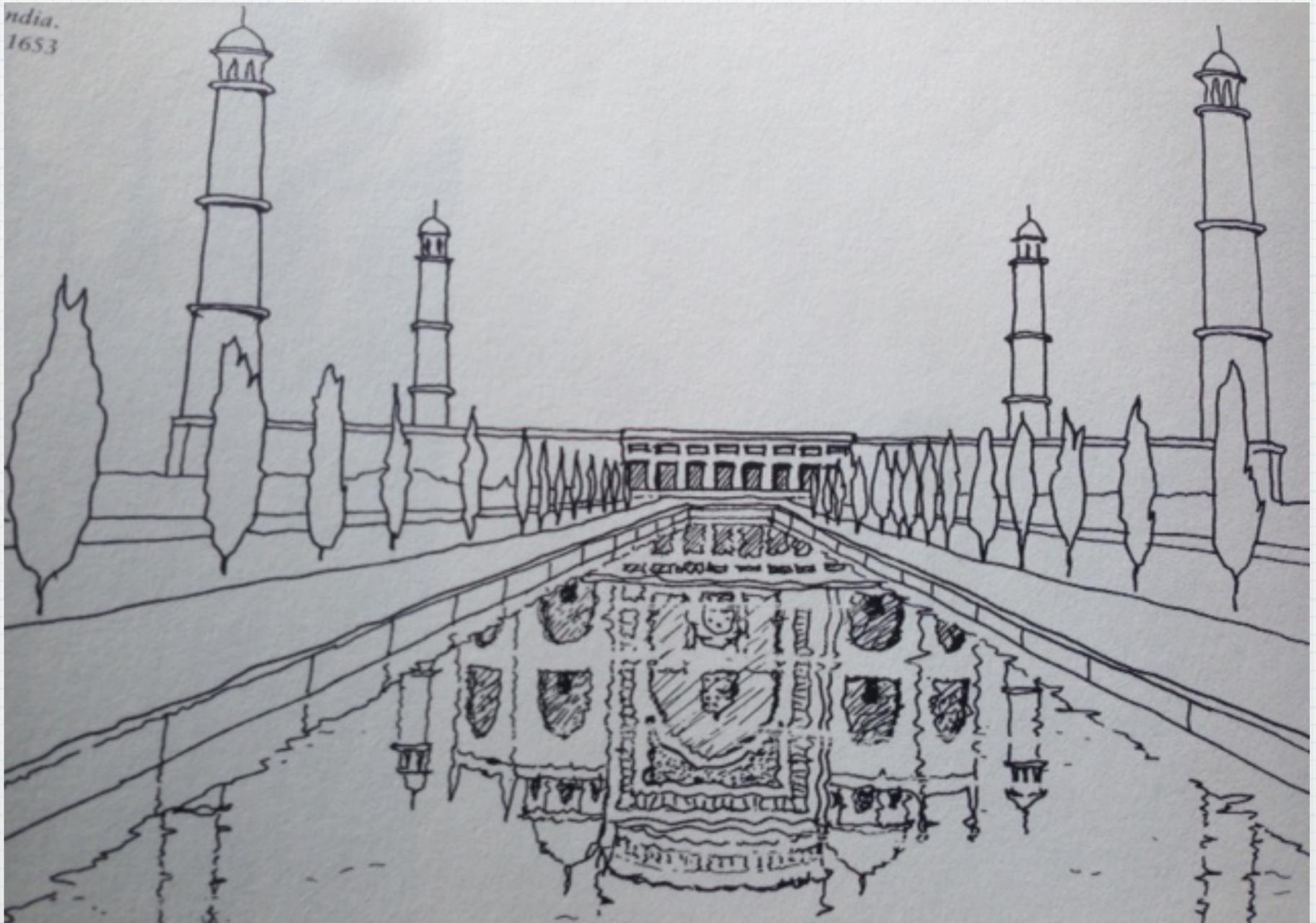
# IAT 208

## Drawing as Inquiry

**Week 4 Lab:  
Linear Perspective &  
Marker Rendering  
Summer 2015**



# Warm Up: Faux Perspective



# The Three Types of Perspective: Summarized

## Two-Point Perspective:

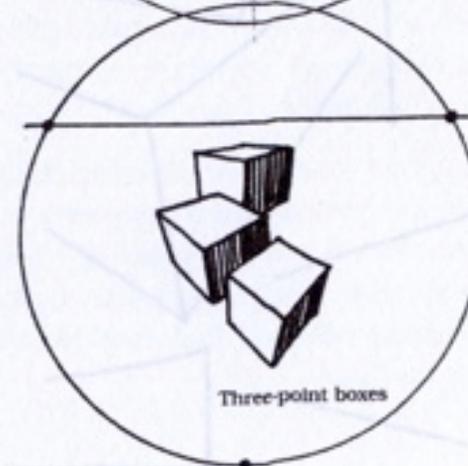
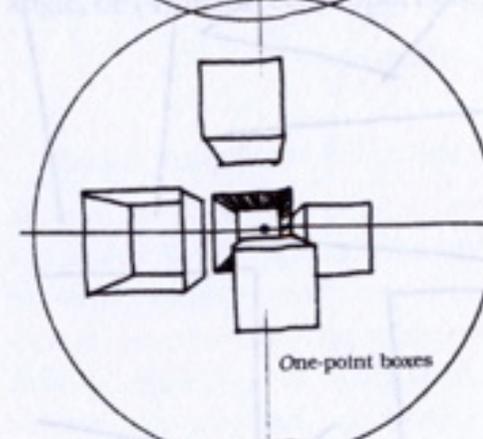
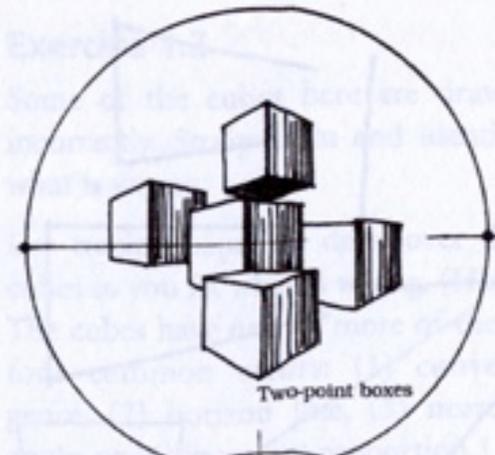
- Edge of box against glass
- Two kinds of lines-vertical and perspective

## One-Point Perspective:

- Side of Box against glass.
- 3 kinds of lines- vertical, horizontal, and perspective.

## Three-Point Perspective:

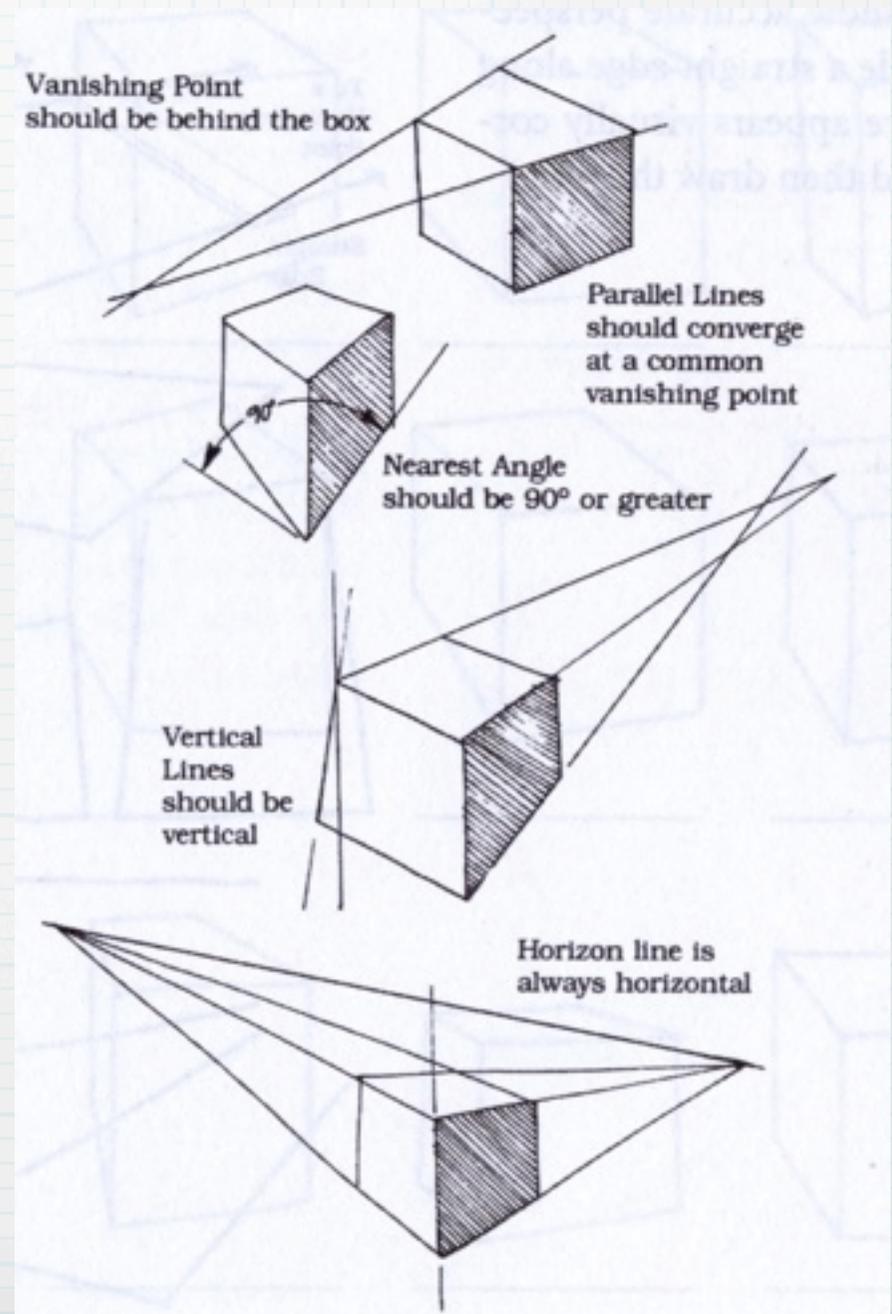
- Corner of box against glass
- 1 kind of line-perspective.



# Key Principles of Perspective

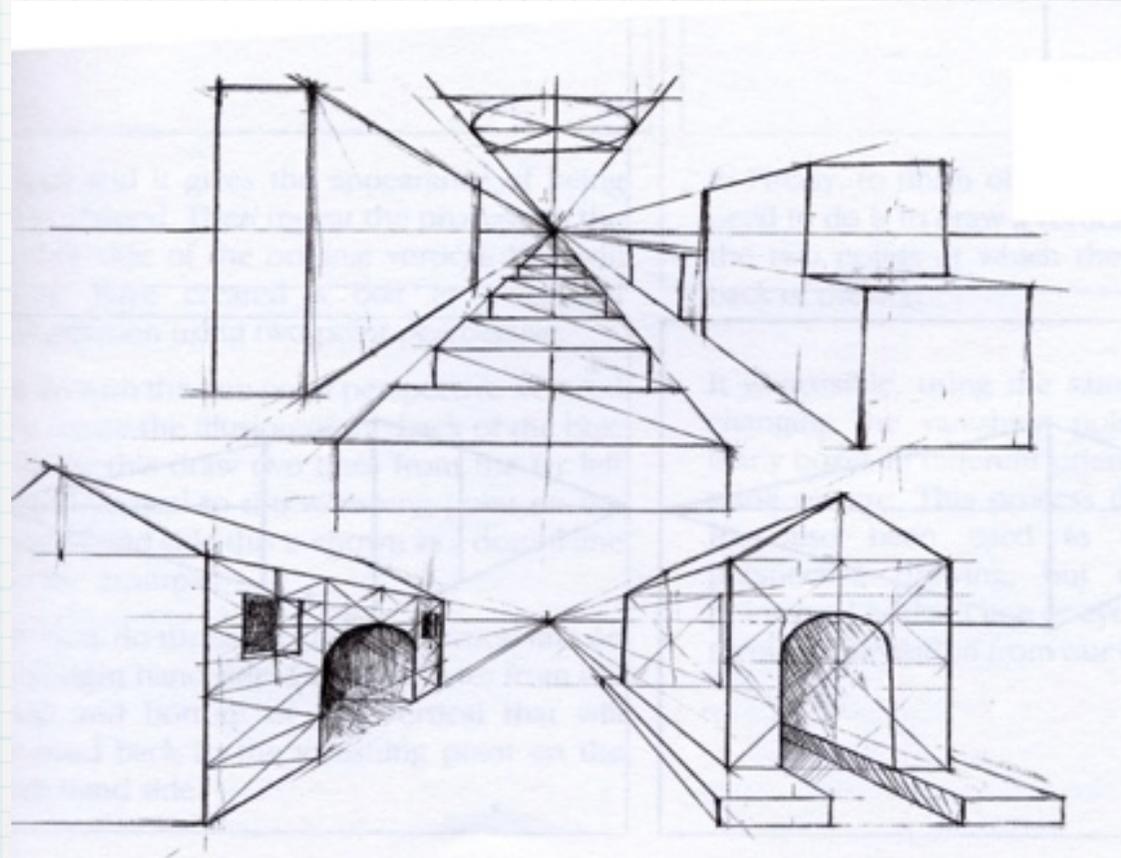
The key principles to remember when drawing boxes in perspective are:

1. Perspective lines converge at a vanishing point
2. The horizon line is always horizontal
3. The nearest angle should be 90 degrees or greater.
4. Parallel lines should converge to a common vanishing point



# Drawing One-Point Boxes

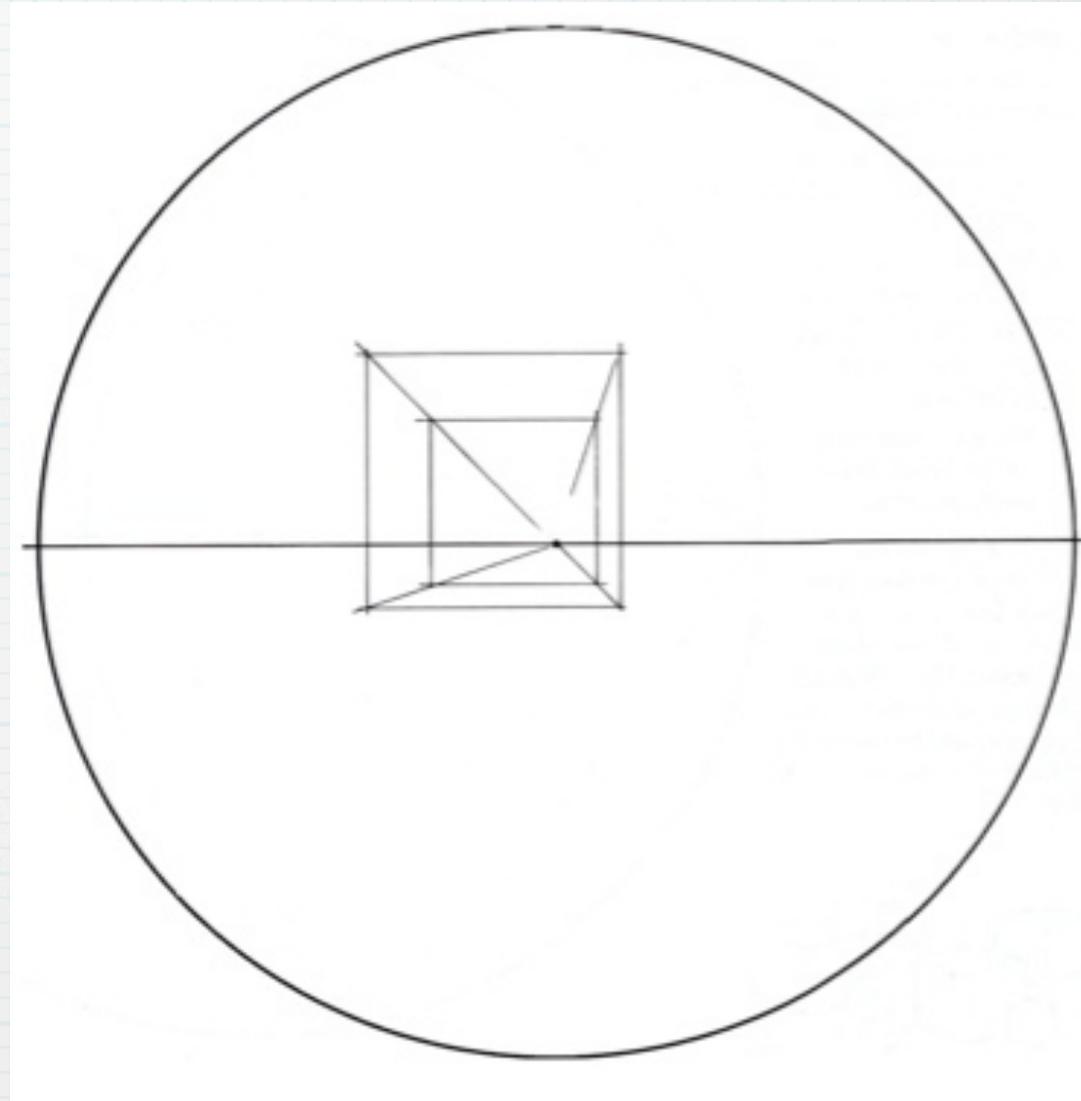
- You have three kinds of lines in one-point perspective- vertical lines, horizontal lines and perspective lines.
- Try imagining that the box is transparent so that you can see the hidden edges, sides and corners.
- Remember that with one-point perspective, the farther away from the central vanishing point, the closer to the outer edge of the circle, the greater the distortion.



# Exercise: Drawing One-Point Boxes

**Time: 15 minutes**

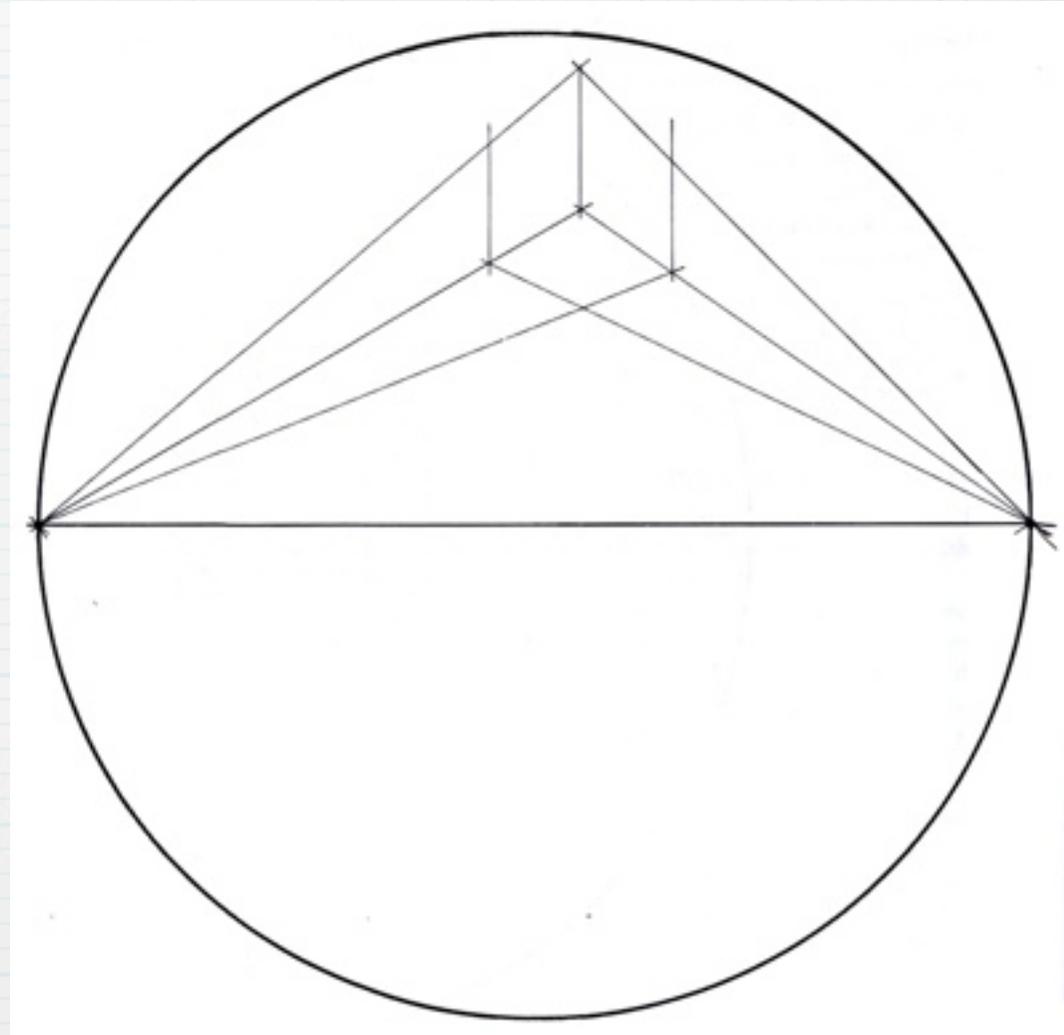
- Reproduce the following circle:
- Draw as many boxes as you can within the circle.
- Try drawing them with different sizes.
- Use your eraser to remove any perspective lines (prevents confusion!)



# Exercise: Drawing Two-Point Boxes

**Time: 15 minutes**

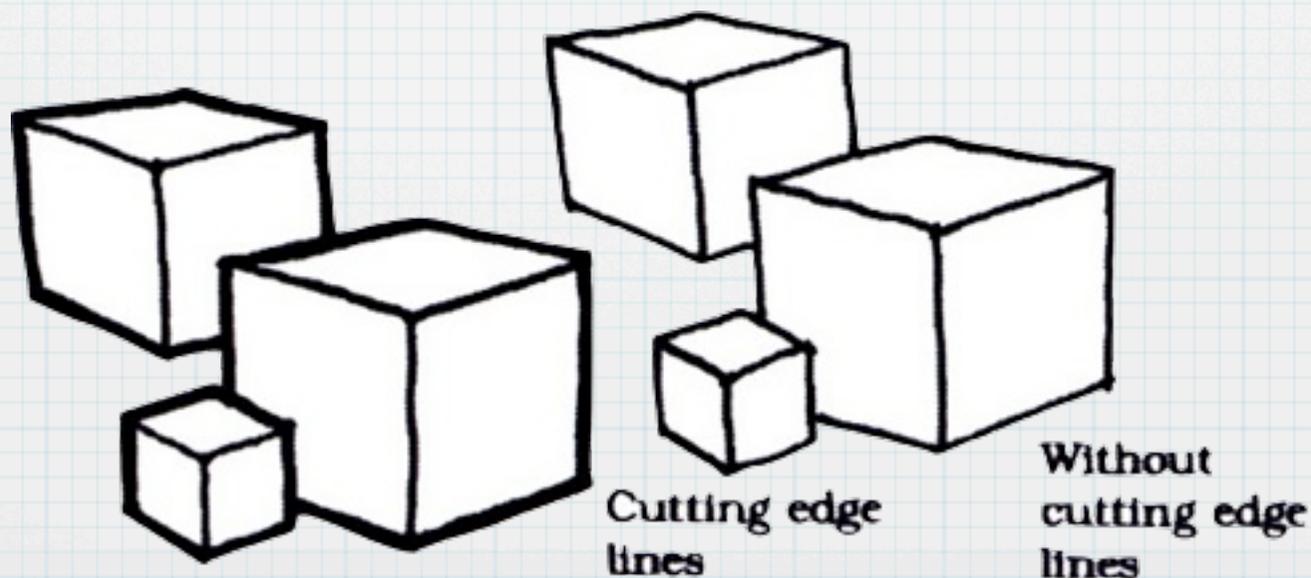
- Finish drawing the other box that was started in the lower half of the circle.
- Draw as many boxes as you can within the circle at varying locations.
- Try to draw 2 boxes that sit in front or behind other boxes.
- If you finish early, try using some of the shading techniques we learned earlier!



# How to Draw Outlines

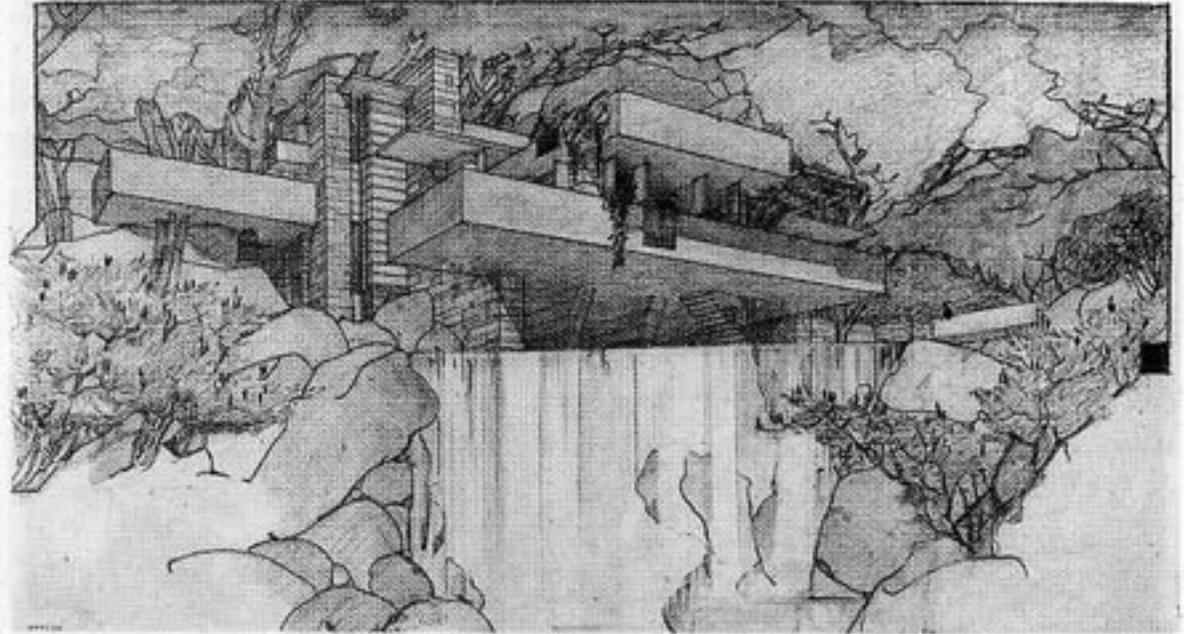
## Exercise: Put Cutting Edge Lines: 10 minutes

- Here is a hint to use when drawing objects.
- The outside lines of the object should be drawn **darker and heavier**.
- The darker outline should make the boxes stand out by themselves and show whether they are in front or behind another object.
- **Hint:** To determine the outside lines, imagine that you could slip a piece of paper behind the object!
- For this exercise, draw a series of boxes in two point that are in front of each other and differing scales (at least three). Draw the correct outlines. (*Stanyer, The Complete Book of Drawing Techniques*)

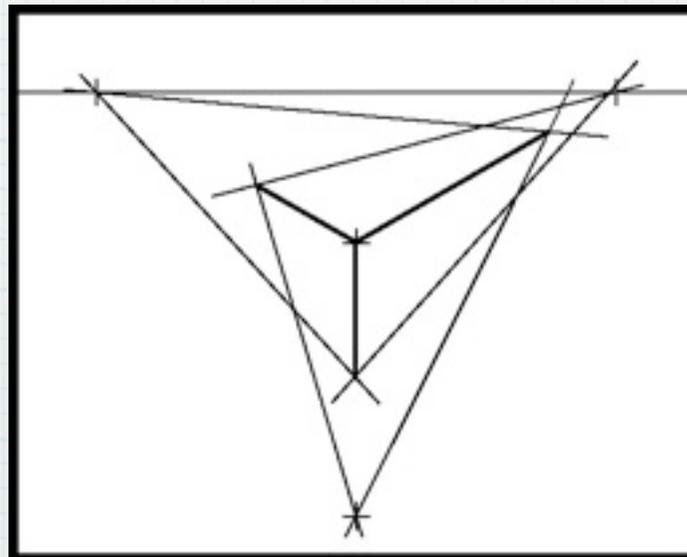


# Three-Point Perspective

- **Three-point perspective** is viewed when lines appear to converge at three given points either to the sides of the picture plane or at the top or bottom of the page, depending on where eye level line.
- Look at the corner of the building in the following image. As the sides of the building go away from you, the two parallel edges create lines that will disappear at a point on the horizon line.
- As you look up at the building you will notice that the vertical lines that go up closer at the top so that they would eventually disappear at a point high above the building. (*Stanyer, The Complete Book of Drawing Techniques*)



3.62 Frank Lloyd Wright, Drawing for *Fallingwater*, Kaufmann House, Bear Run, Pennsylvania, 1936. 15 $\frac{3}{8}$  × 27 $\frac{1}{4}$  in. (39 × 69 cm).

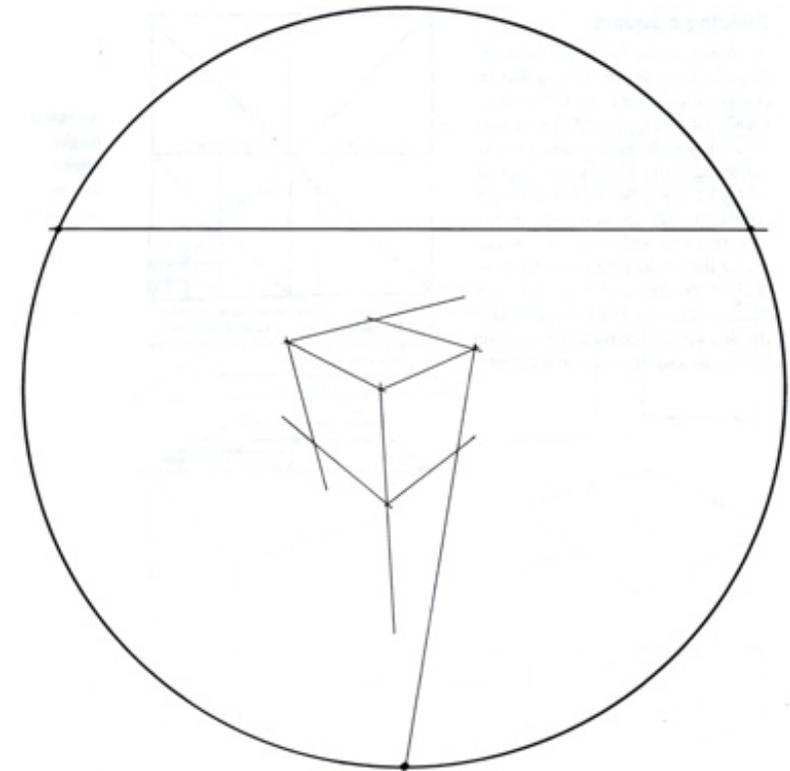


# Exercise: Drawing Three-Point Boxes

**Time: 15 minutes**

- In your sketchpad, draw a circle
- Establish a horizon line that is above the halfway mark on one and draw at least three boxes that you are looking down on in three-point perspective (See A)
- Next, establish a horizon line that is centered or below center and draw at least three boxes (ant's eye view).
- **Hint:** If you are daring, try designing a cityscape with boxes of different heights and proportions!

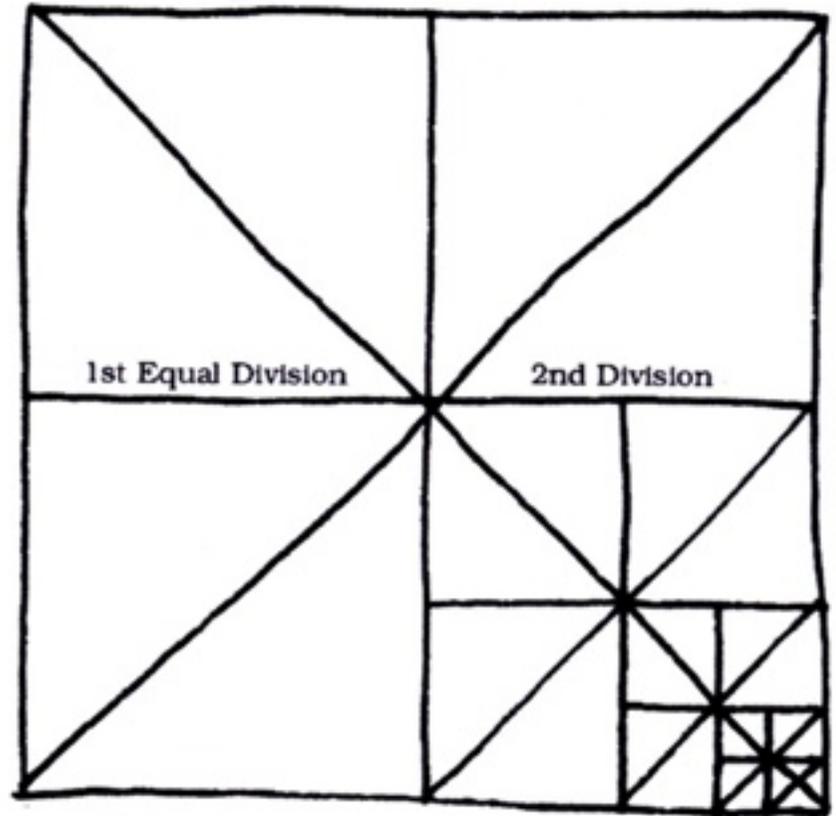
A)



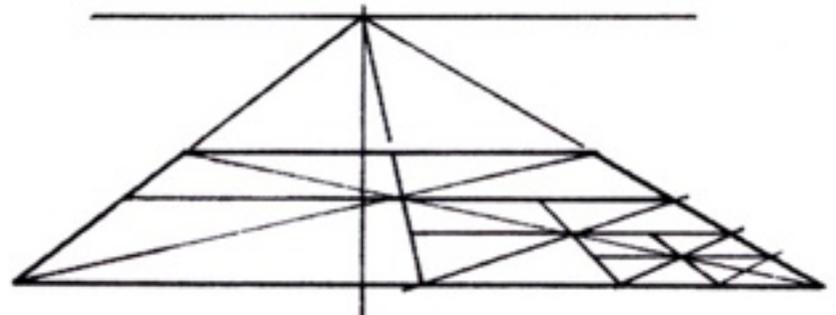
# Dividing a Square

- As seen here, diagonal lines drawn from corner to corner of a square cross in the exact middle of that square.
- A line drawn from the middle of the square to the vanishing point bisects the edge at midpoint.
- If you draw a line from the corner through the midpoint of the side, this line will cross the bottom line of the square.
- This principle is used to help divide a square into equal segments.

*(Stanyer, The Complete Book of Drawing Techniques)*

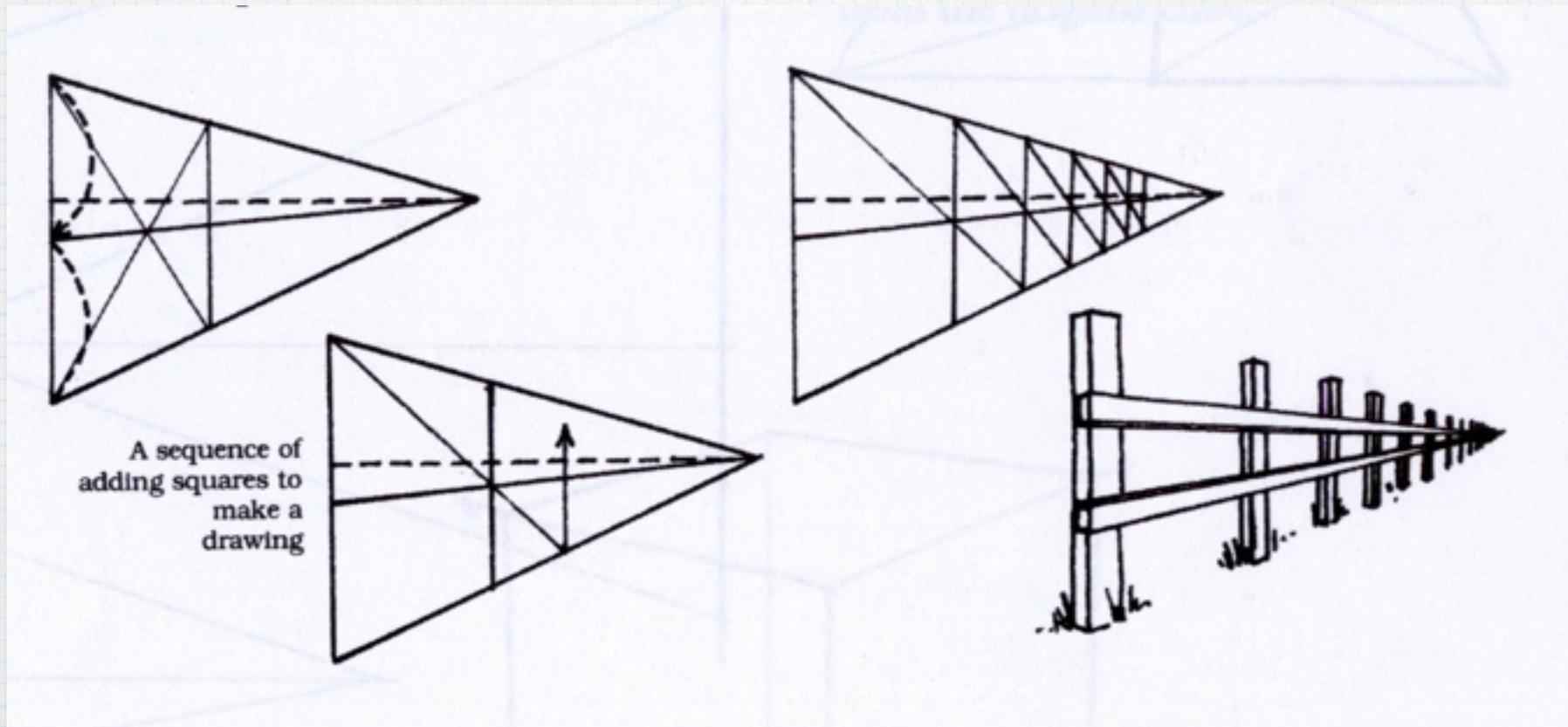


Below is a square drawn in perspective. You are above the square looking down on it. Using the diagonal to divide the square applies in perspective also.



# Adding Squares

- The same technique of using diagonal lines to find the exact middle of the sides of the box also enables you to draw more than one square in perspective.
- You can draw another diagonal line from the corner of the square directly through the midpoint of the edge and down to where it finds the bottom corner of the next square. *(Stanyer, The Complete Book of Drawing Techniques)*



# Exercise: Drawing a Fence

**Time: 15 minutes**

- Try drawing this fence using one point perspective.
- Add texture/tonal values as required



# Exercise: Drawing a Scene [1 pt. Perspective]

25-30 minutes

- In this exercise, you will attempt to mimic the image as best as possible
- Start with the Vanishing Point, guidelines and then fill in the shading where needed.
- Apply your proportional skills (finger) (Stanyer, *The Complete Book of Drawing Techniques*)





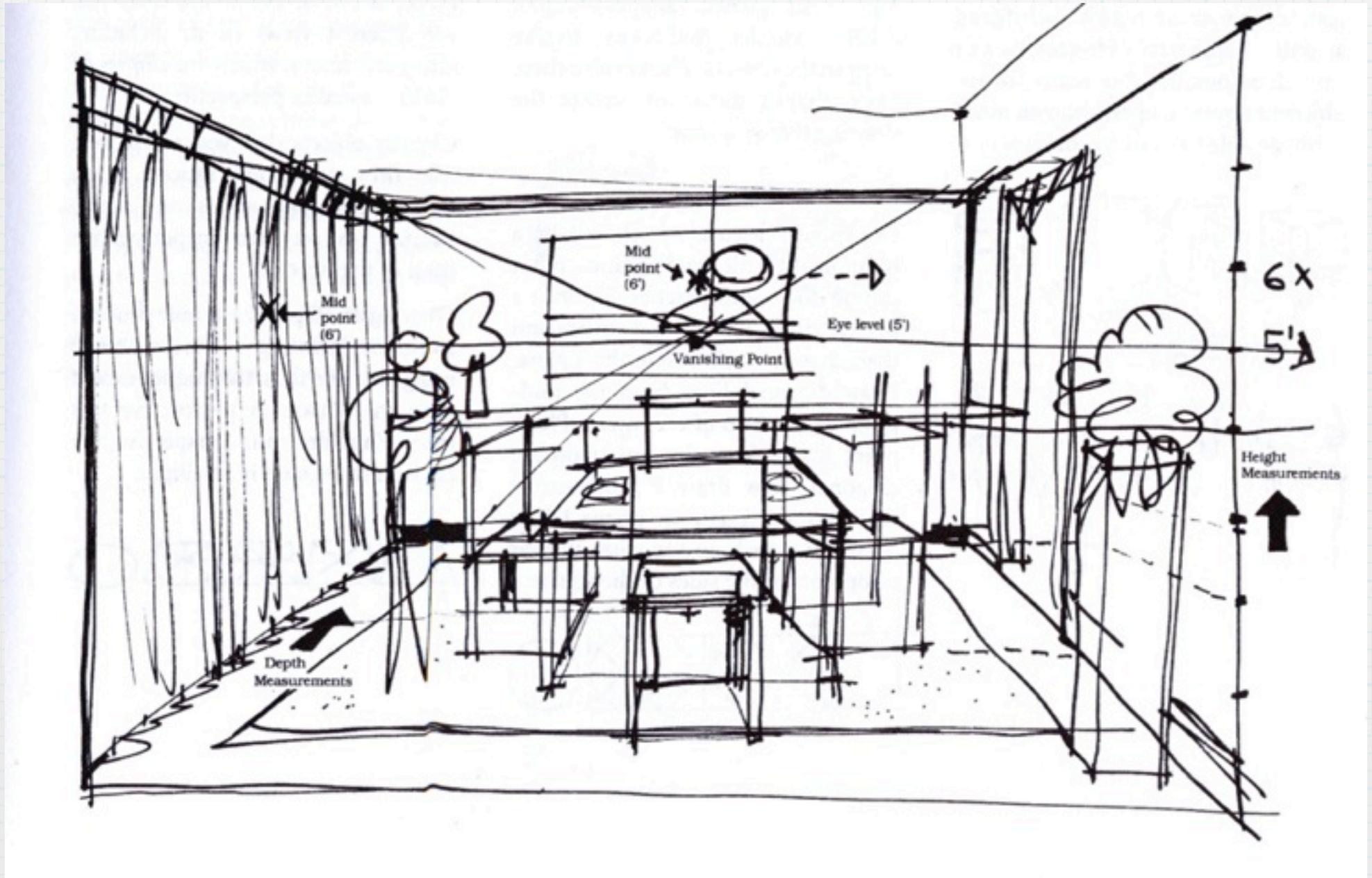
# Option 1: Drawing Your Bedroom

**Time: 30 minutes min.**

- You can do this exercise at home
- Using 1 pt. perspective, draw the interior of a room in your house e.g. bedroom
- Make sure to utilize horizon line, Vanishing Pt. and other construction lines
- Draw the content as close as possible e.g. furniture, bed, other objects
- Be sure to portray tonal value using (shading, hatching)

# Optional Exercise 1: Draw Your Room in 1 Pt. Perspective

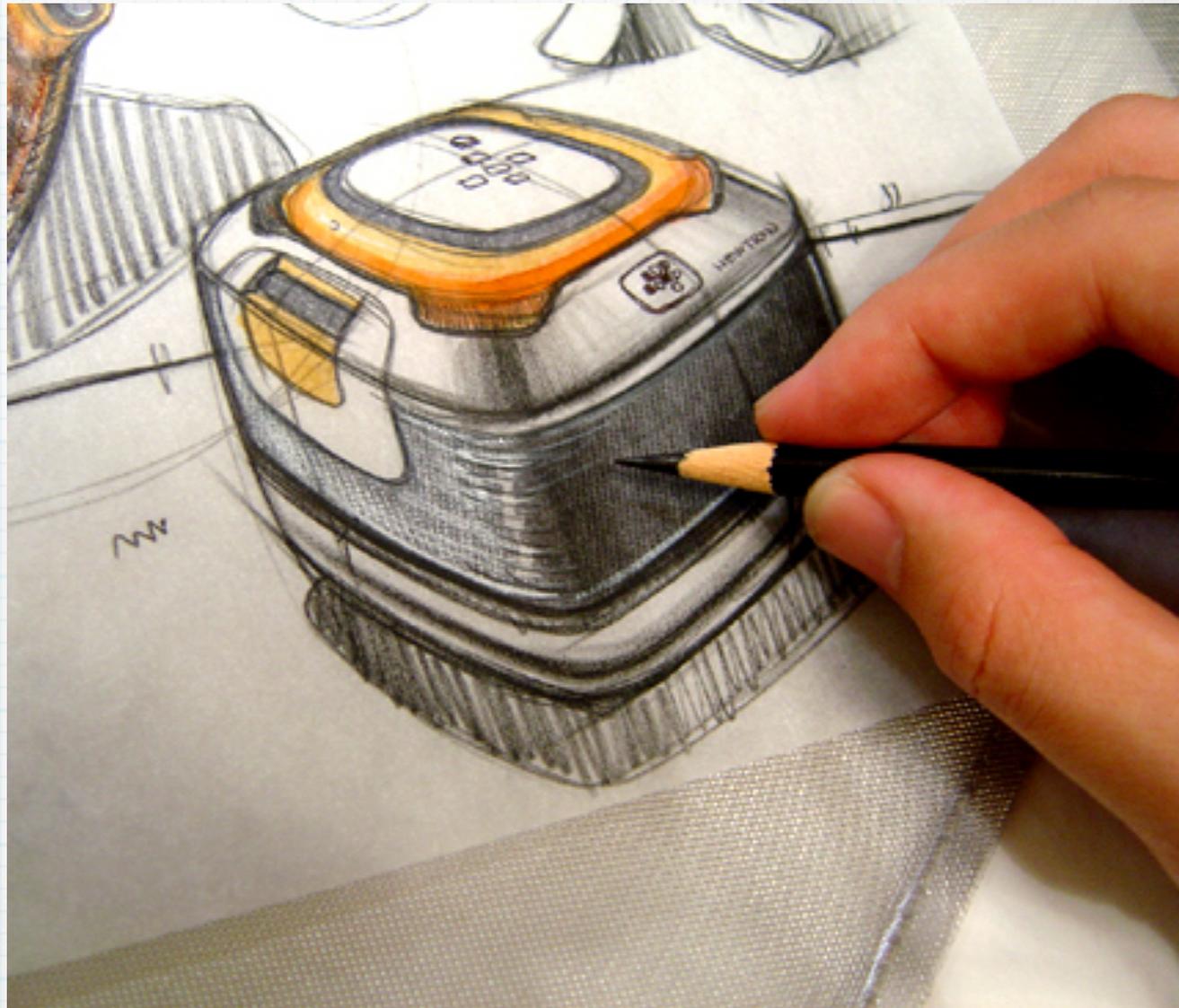
## Perspective



# IAT 208

## Drawing as Inquiry

Working with  
Markers



# Warm Up: Lines

**Time: 10 minutes**

**Tools: Felt markers and fineliners**

- Now that you have the proper tools, you are ready to begin.
- Start with lines. Make some lines with your fine-liner felt- thick lines with your markers and thin lines.
- Try different pressures on the felt and fineliner point. Lay the pen down on the paper; use the side of the pen tip to draw a line.
- Become familiar with the results you get from varying degrees of pressure and angles of the pen. *(Hanks, Draw! A Visual Approach to Thinking, Learning and Communicating)*

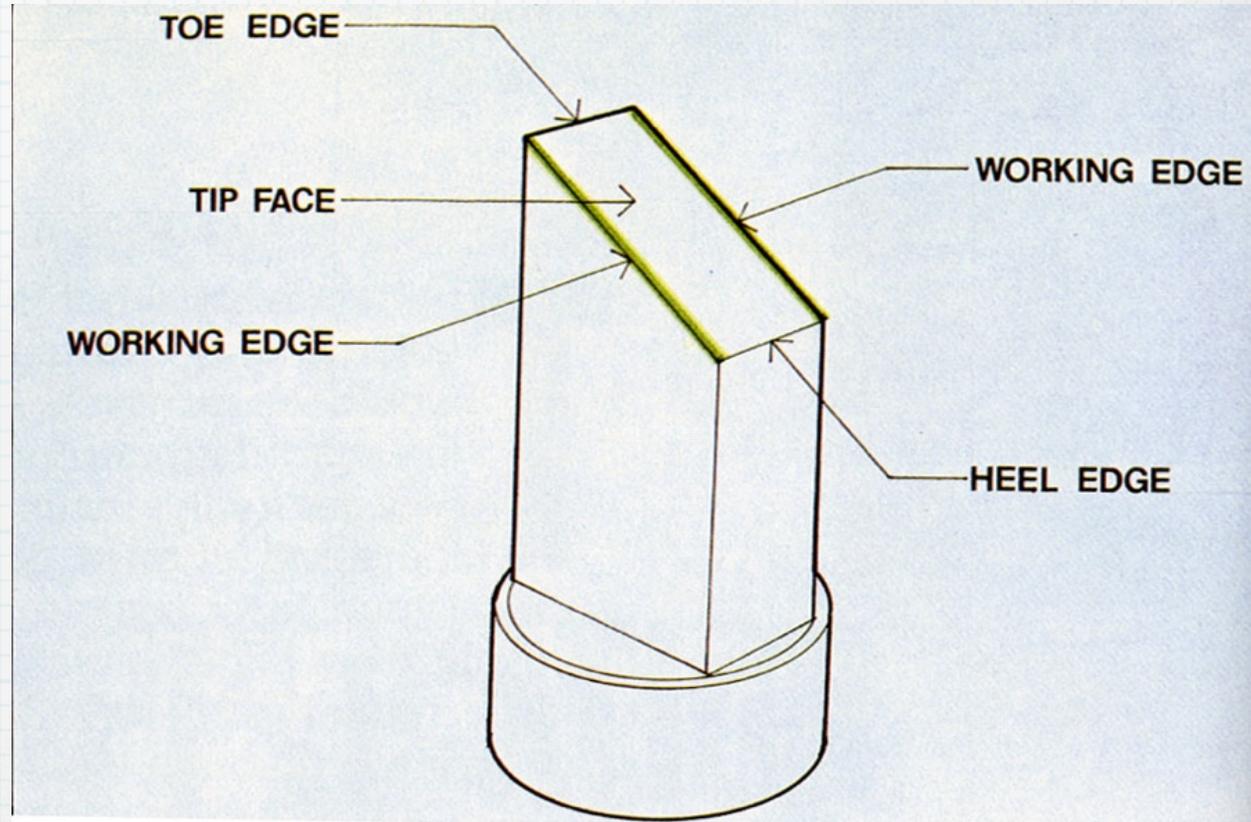




# How to Hold the Marker

- Hold the marker in your drawing hand so that you can see the point of contact between the working edge of the marker and paper surface.

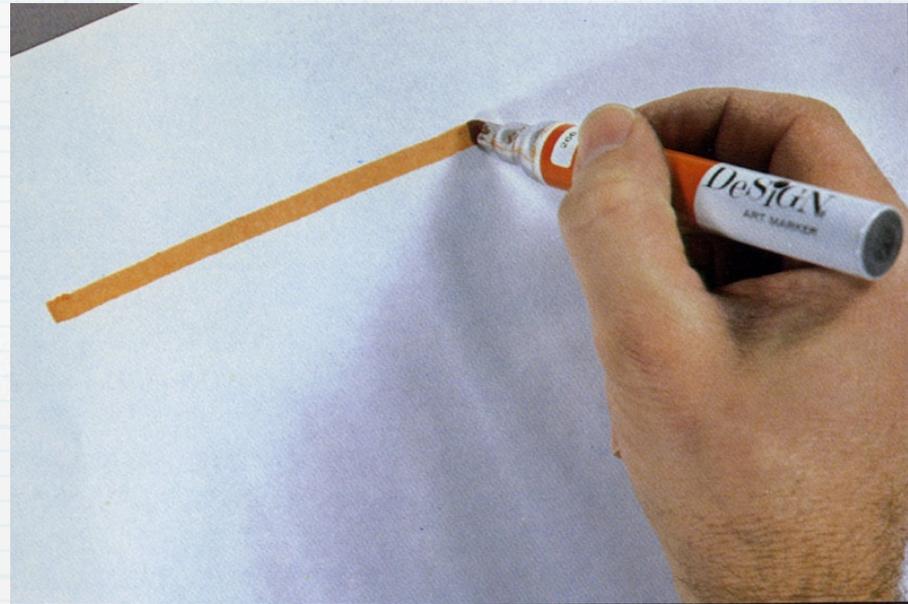
- With the working edge down, make your mark with a smooth, **quick stroke away from your body** (direction-wise). *(Rendering with Markers: Kemnitzer)*



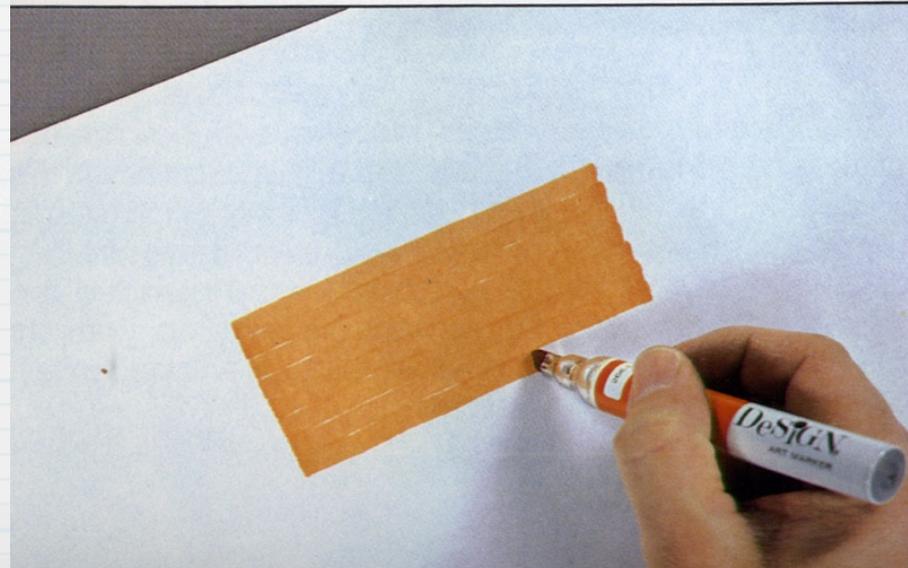
# Blended Parallel Stroke Technique

**Time: 10 Minutes**

- The blended parallel stroke technique is used to create a smooth field of colour.
- It involves laying down marker strokes parallel to and just barely touching each other, but **not overlapping**.
- Create a series of parallel lines. Make sure to leave a fine gap between strokes which will fill in through the seepage of the ink.
- **Warning:** Don't use a ruler as a guide because the ink will pool under the ruler and cause capillary-like pools of ink!! *(Rendering with Markers: Kemnitzer)*



85

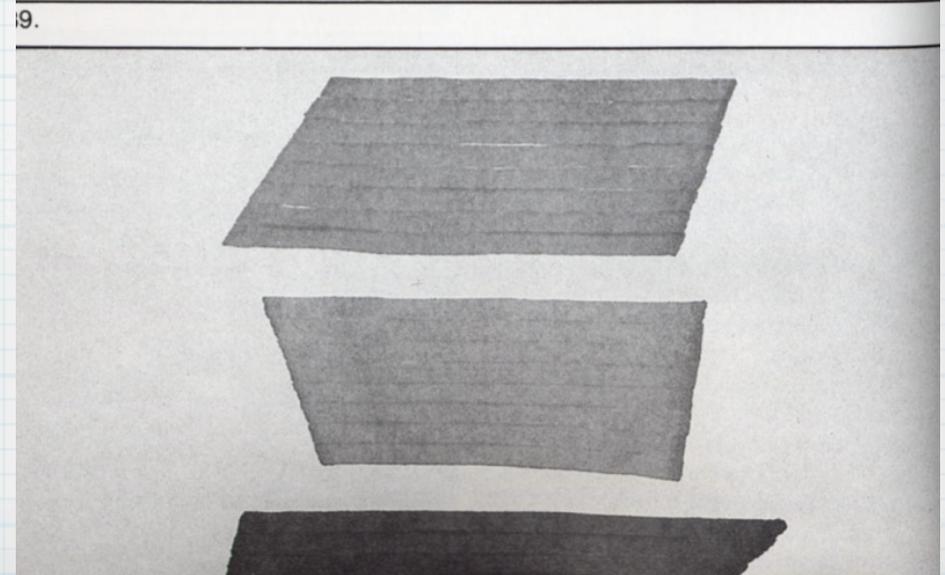
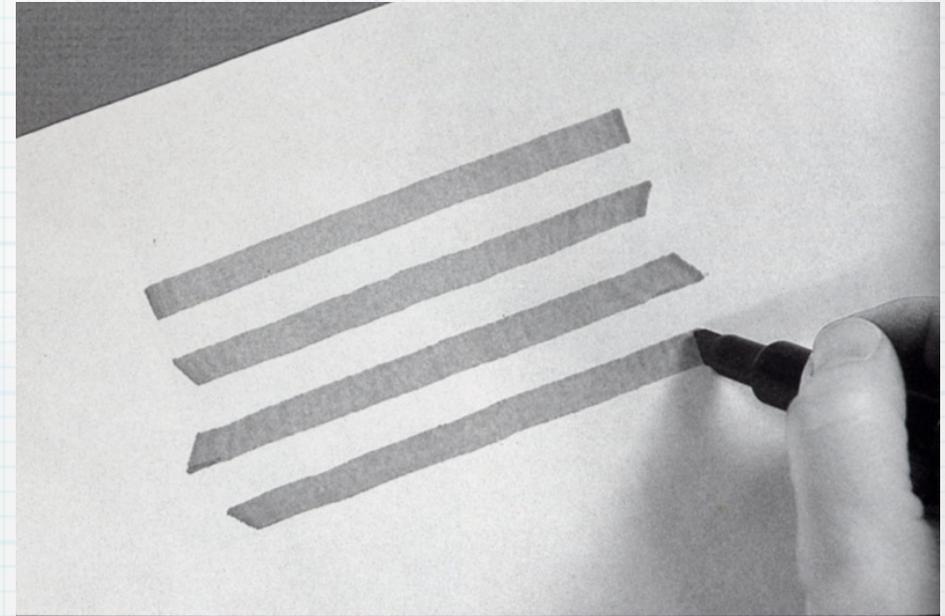


# Exercise: Controlling the Working Edge

**Time: 10 Minutes**

- In a typical rendering the angle of the marker stroke is seldom perpendicular to the stroke direction.
- When creating irregularly shaped fields of colour, the beginning of the stroke is often a different angle than the end of the stroke.
- To do this you must **carefully rotate the marker tip** while making the stroke until it is in the correct orientation at the end of the mark.
- **Using a fresh sheet of paper**, practice this technique by making several straight marks beginning and ending at a variety of angles. This will help you in drawing irregular shapes.

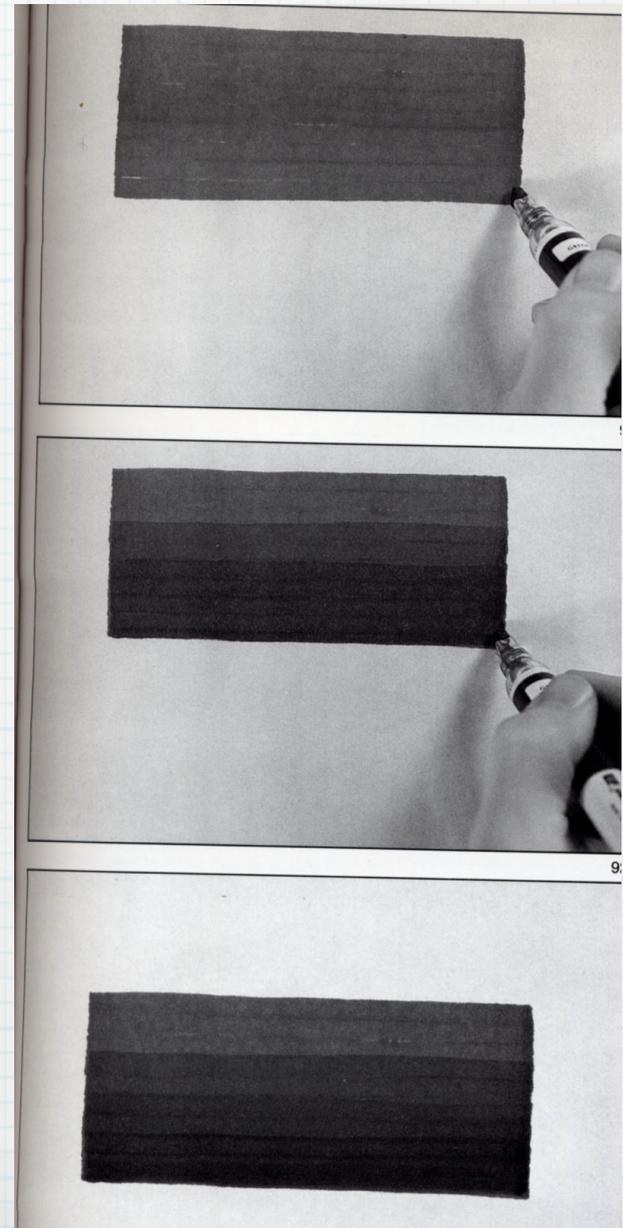
*(Kemnitzer)*



# Exercise: Overcoating & Controlling the Value Range

**Time: 10 Minutes**

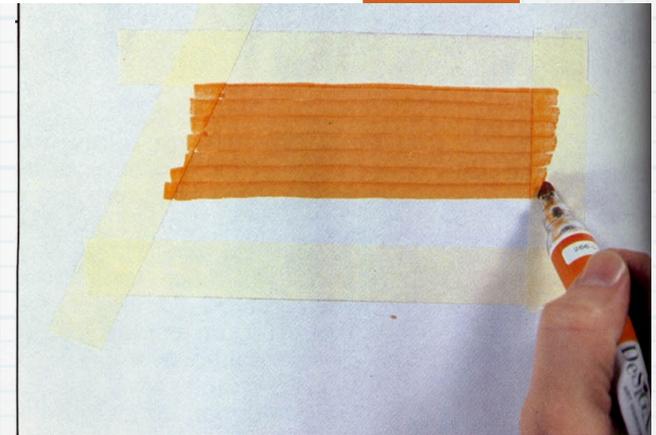
- Once a smooth field of colour has been established, the value range within the field can be extended toward the dark end of the scale by **overcoating the field with a second, third and fourth coat of colour.**
- When the first coat is dry (mere seconds), the next coat is added in areas of the fields that are to be darkened or intensified.
- The overcoating has to be done fairly quickly so as not to dissolve the first coat.
- Marker inks are additive in nature, when overcoated, they maintain a consistent hue but darker values.
- **Using your blended parallel stroke work or a new rendering, try overcoating with parallel strokes. Try several examples, can you create dramatic value ranges?**  
*(Kemnitzer)*



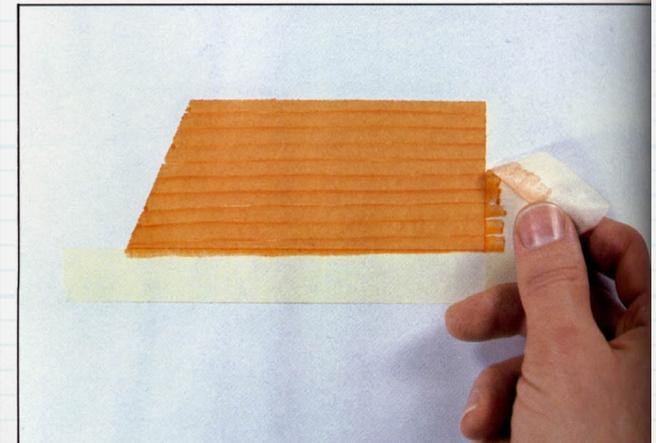
# Exercise: Masking Areas with Tape

**Time: 5 Minutes**

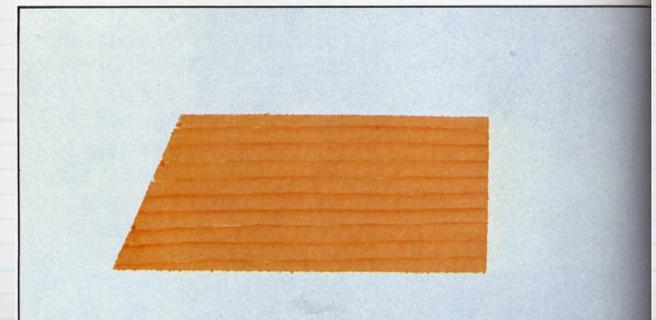
- Precisely defined fields of colour can be created using masking techniques. In this demonstration, a geometrically shaped area is defined with masking tape and burnished down securely so that the tape won't seep under the adhesive.
- Tape works best when dealing with shapes that have straight edges.
- When the ink is dry, you can remove the tape. Be careful not to rip the paper.
- **Try a few irregular shapes (e.g. table top in perspective) using this technique.** *(Rendering with Markers: Kemnitzer)*



154.

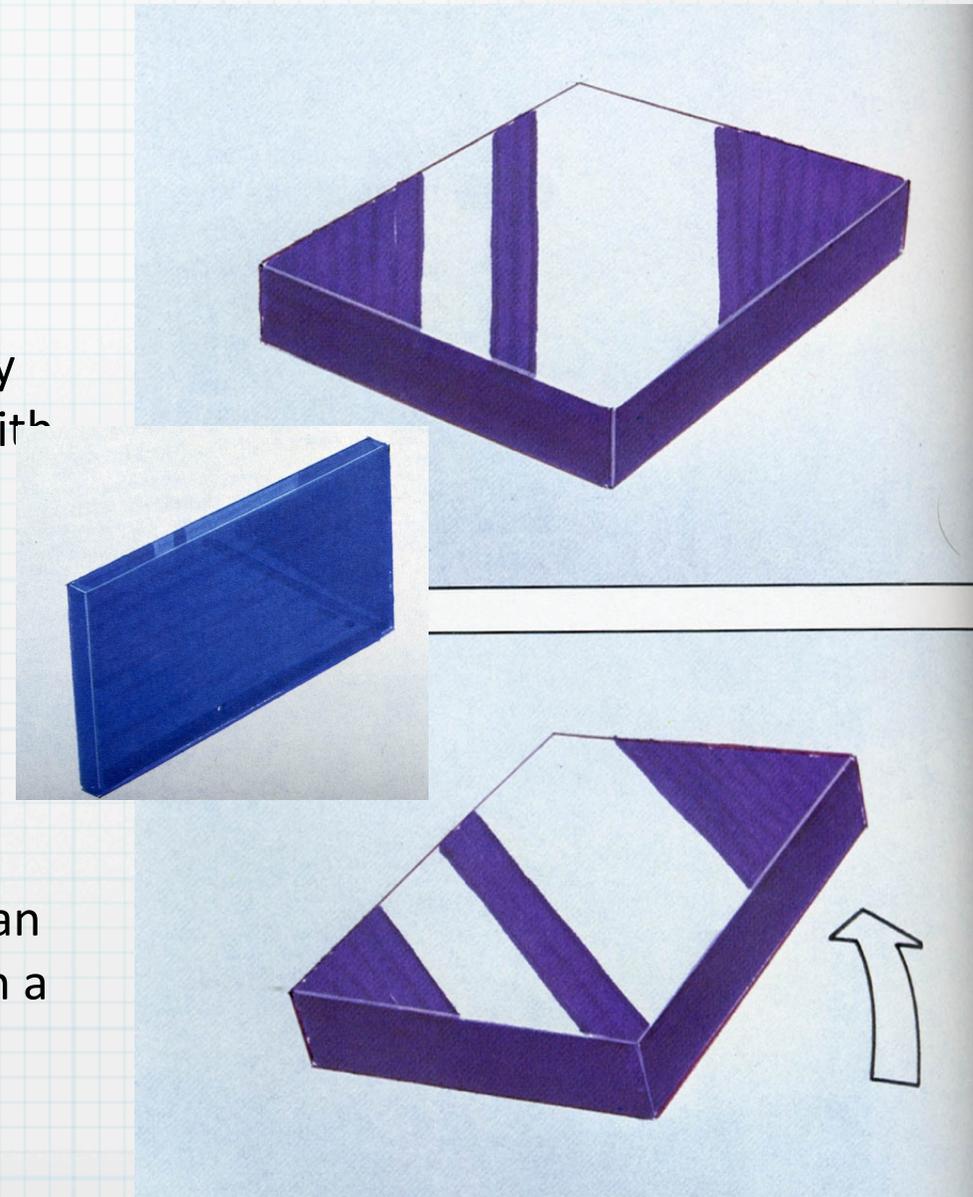


155.



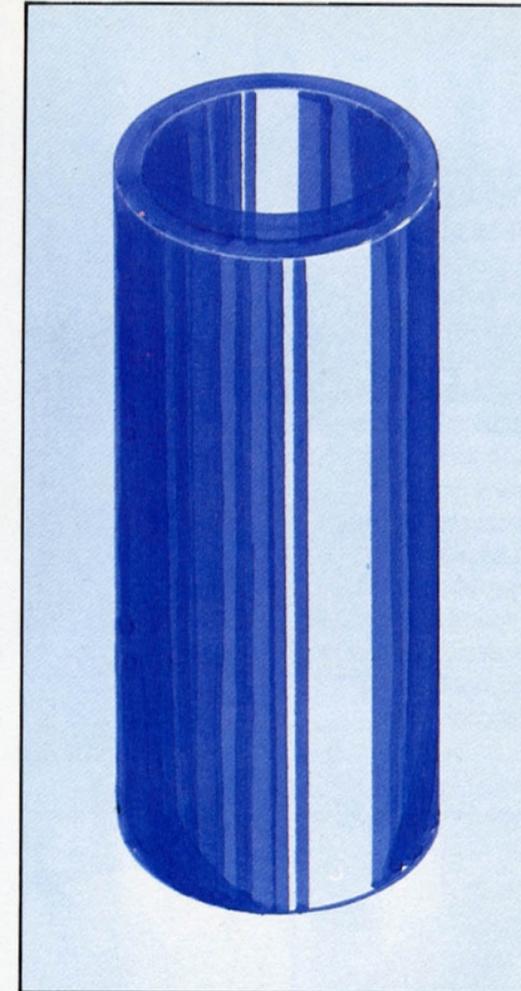
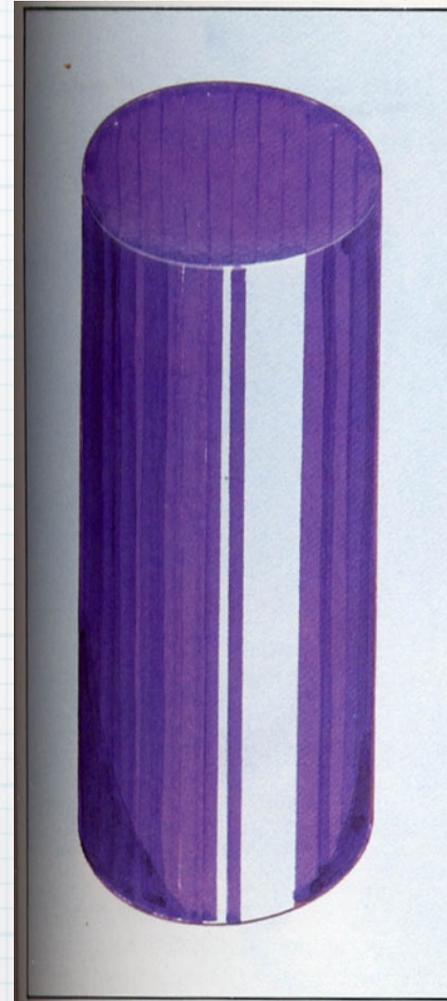
# Shapes: Flat Surfaces

- A flat surface that is in horizontal position (e.g. the surface of a body of water) always has reflected highlights that appear vertical to the viewer's eyes.
- The reflections can be dramatically illustrated by leaving white spaces between areas coloured with marker, using the blended parallel stroke technique.
- As an object moves away from horizontal position, the reflections become slanted to the viewer's eye.
- The reflections of the top surface of an object can be muted by overcoating the entire surface with a second coat of marker colour.
- *(Kemnitzer)*

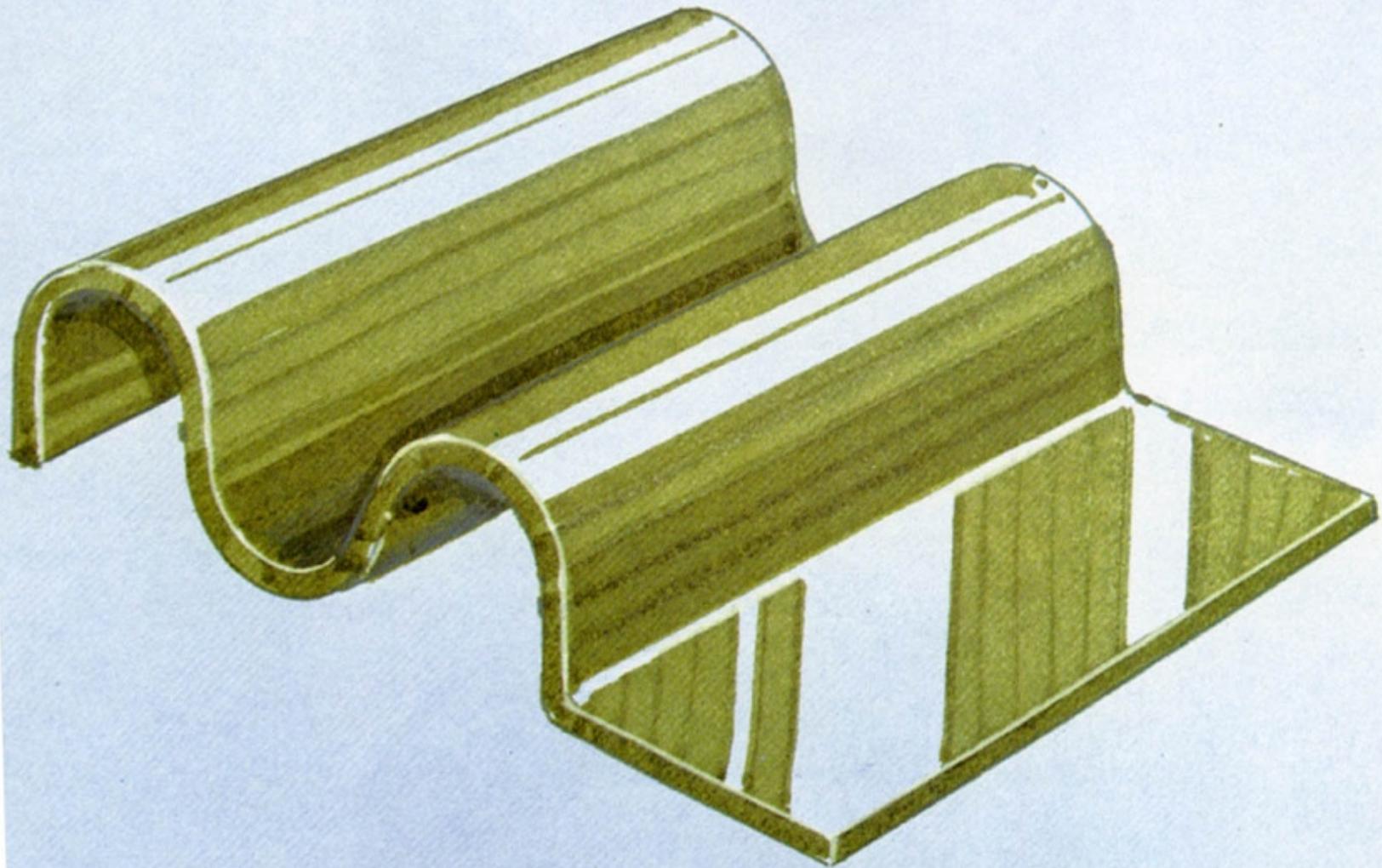


# Shapes: Columns and Tubes

- Round forms such as columns and tubes distort reflections and stretch them along the entire length of the form.
- These reflections are generally centered on the form, near the point closest to the viewer's eye.
- It is best to offset the reflections to add a bit of asymmetry and visual interest.
- The best way to render these shapes is to lay in fields of parallel strokes and to lay a second layer on the vertical edge farthest from the highlight. (*Kemnitzner*)

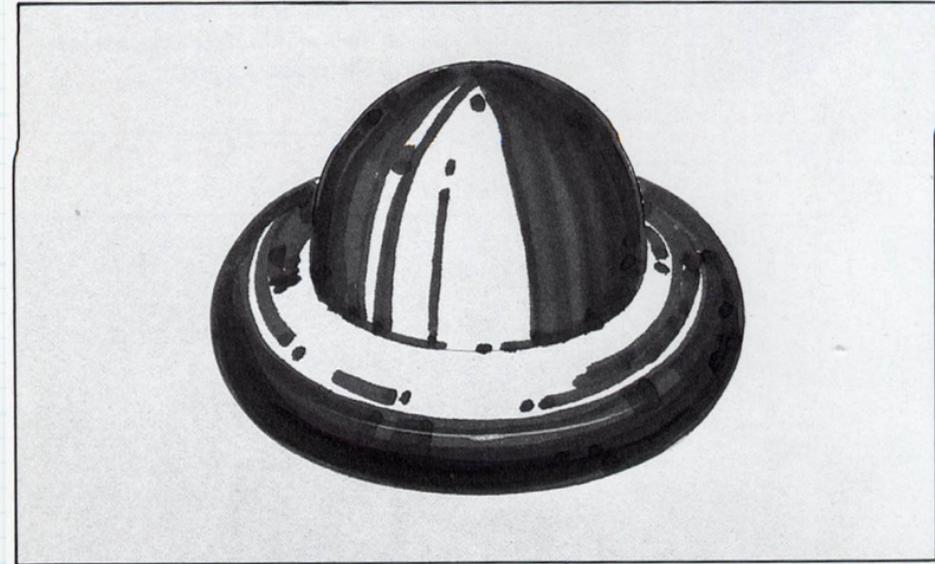


# Shapes: Columns and Tubes

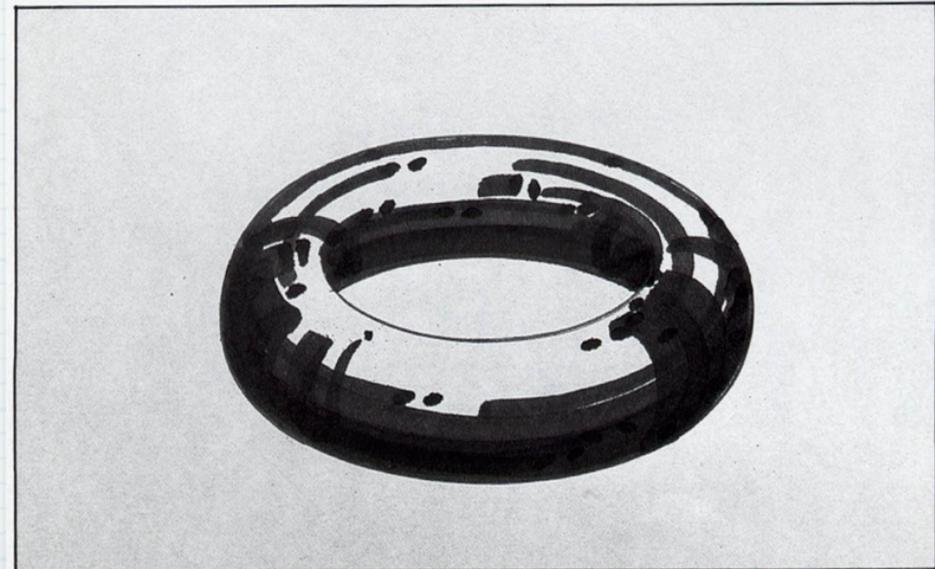


# Shapes: Compound Curves

- **Compound curves** are those surfaces that curve in two or more directions simultaneously.
- Illustrating compound curves with markers demands sensitivity to the subtleties of light patterns and blending and shading with markers.
- The marker strokes should follow the contour lines of the form such as in the example shown here.
- Because of the tapered form of this object, the marker had to be rotated during each stroke to vary its width.
- Notice that the highlights are tapered so as to emphasize the form. *(Kemnitzer)*

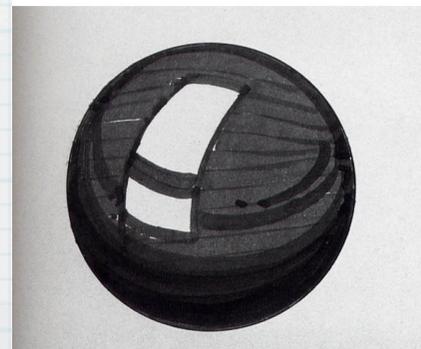
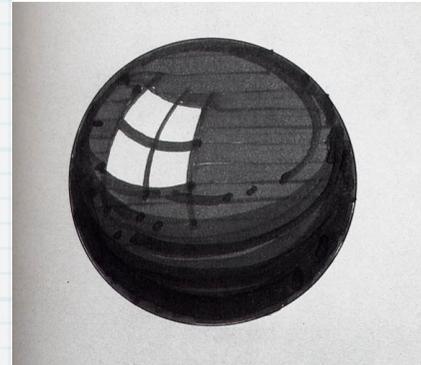


123A.



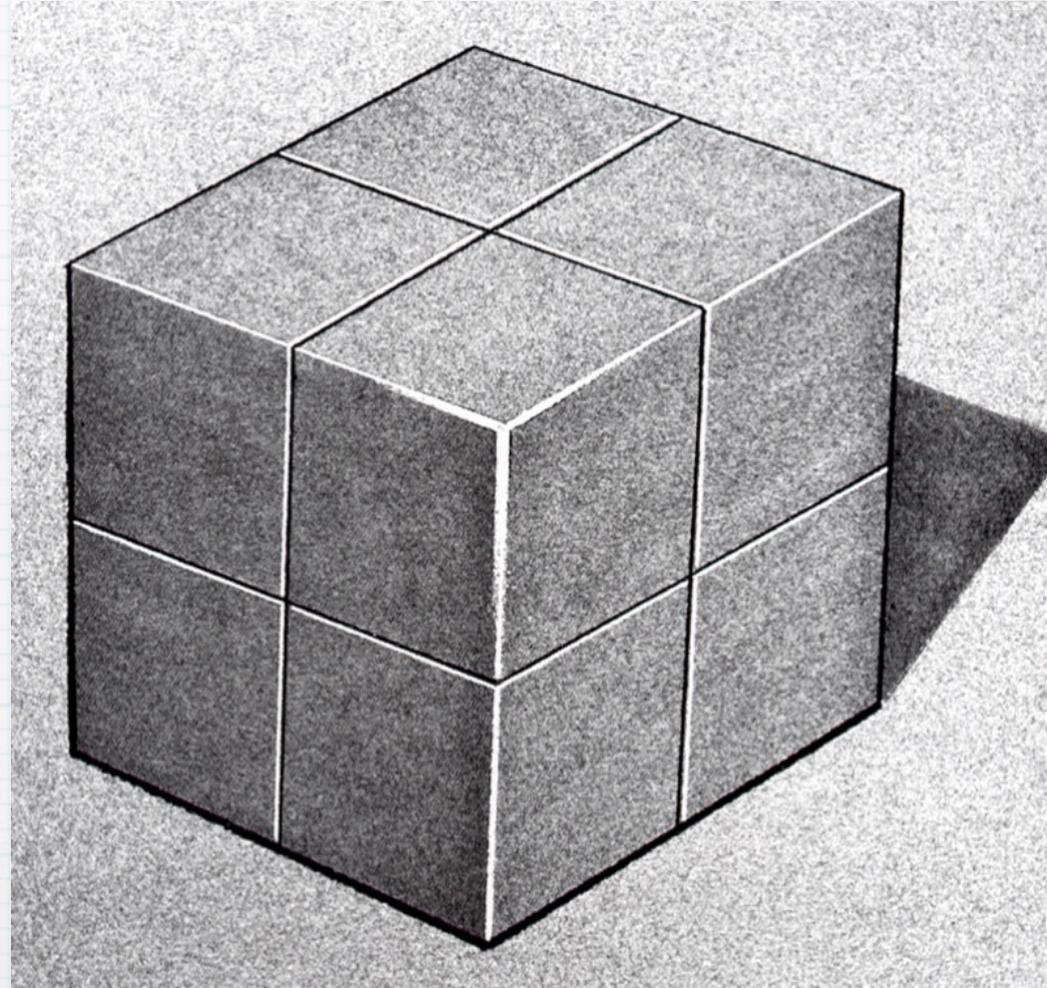
# Shapes: Spheres

- **Spheres** can be characterized by highlighting up to half visible surface of the form in such a way that the edges of the highlights conform to the contours of the shape.
- Values of the sphere are built up by overcoating. The darkest areas of colour should be at the bottom and toward one side of the sphere.
- The reflections can be applied in a subtle fashion as in the top illustration, or dramatically like the bottom.
- The 'window' can be drawn in by used the thinner edge of the marker. (*Kemnitzer*)



# Highlighting Forms with Colour

- The form of an object and the reaction of light to it can be emphasized with the sensitive use of light and dark lines.
- Highlight lines are defined with light coloured pencils and shadow lines are defined with dark coloured pencils and fine black felt.
- Notice how the highlight lines get wider as they approach the corner closest to the viewer.
- The shadow lines are widest on the bottom edge of the cube, which helps to give the illusion that the cube is resting on a surface and not floating on the surface. (*Kemnitzer*)



# Exercise: Plastic Hairdryer

**Time: 20 minutes**

- The principal visual quality of a hair dryer is the reflectivity of the surface.
- Most plastic finishes are very glossy and have several highlights.
- I would like you to use the techniques used in this class today.
- With the contour image provided, first fill in the colour, be conscious where you want to put the highlights by leaving them bare. Second, add the overlays where the shadows should be. Last, add the outlines, (heat grille) and fankles!
- Feel free to experiment and use the handout as your guide.



20.



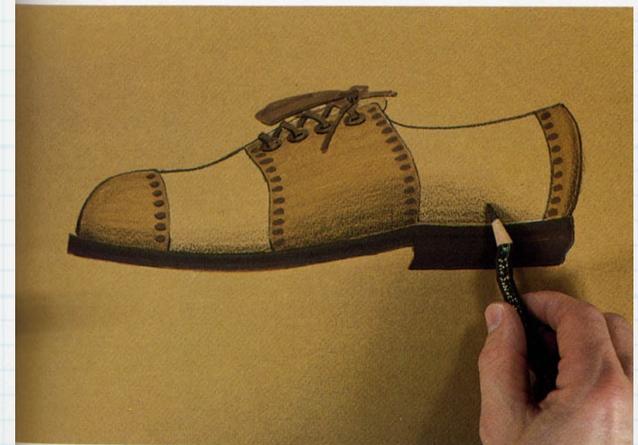
# Emphasizing Forms on Coloured Backgrounds

The use of coloured or tonal papers as a rendering surface is very popular because of the opportunity to use the paper colour as an integral part of the rendering.

- (1) **Marker colour** is first applied to appropriate areas, which are always darker than the paper colour.
- (2) Using a darker coloured pencil, shadow areas of the object are added. Because of the excellent surface tooth of this paper, very rich evenly blended shading is possible.
- (3) Highlights are then added using a white or appropriately coloured pencil. This is very effective in establishing highlights and shadows. (Kemnitzer) p. 150.



1.

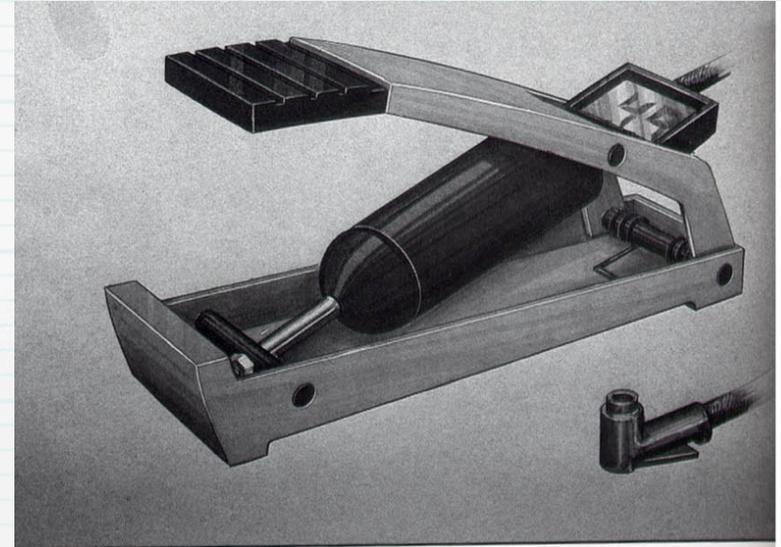


149.

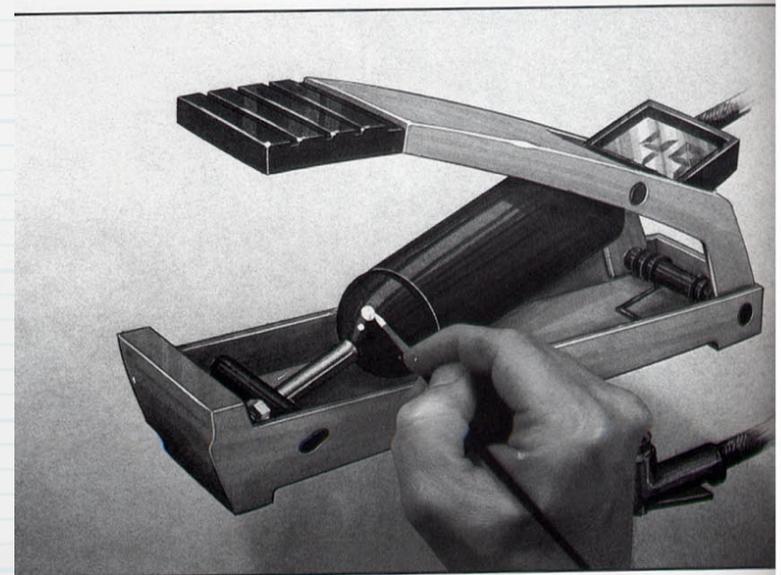


# Usg Farkles (Pin-Point Highlights)

- The intensely concentrated spots of the reflected light that occur on forms in strong light are affectionately called ‘farkles’ by designers and illustrators. They are also referred to as ‘zits’, ‘bullets’ and ‘hot spots’.
- They are very helpful in illustrating strong lighting conditions and or highly reflective edges and surfaces.
- Best of all, farkles add life to the illustration. Farkles are applied after all marker and line applications are completed.
- Use a fine brush, gouache or liquid paper, farkles are applied in shapes from small dots to long blended ‘cigars’. (*Kemnitzer*)



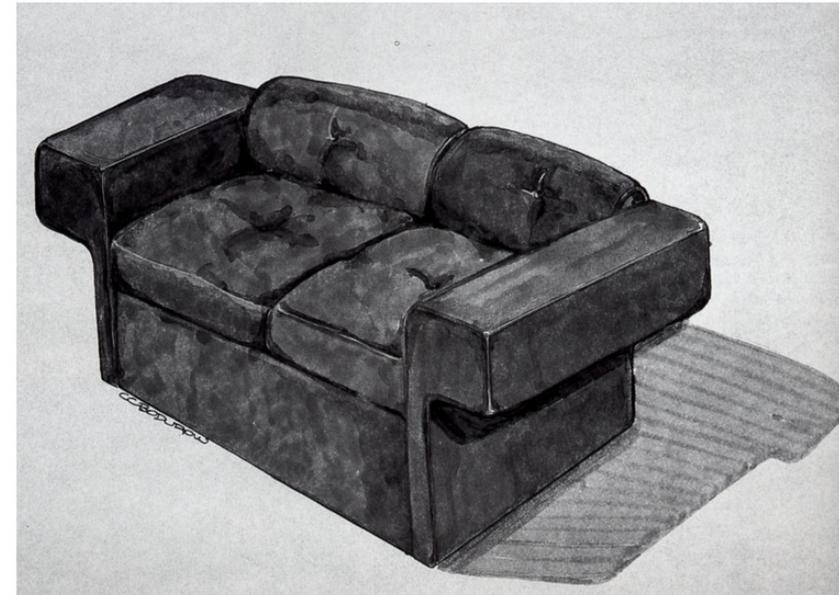
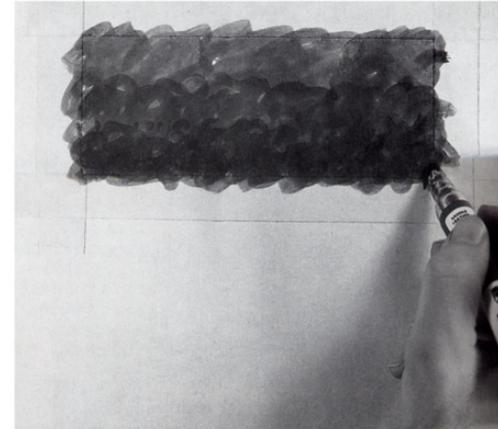
1.



2.

# Scrub-Coat Technique

- With the tip face of the marker in contact with the paper, lay down a coat of colour using a rapid, randomly circular motion.
- By working quickly, the value of the field of colour can be extended by overcoating certain areas of the field.
- The scrub-coat technique results in a very textural visual effect and is especially effective when depicting such materials as cloth, leather, vegetables, and other irregular surfaces. (*Kemnitzer*)
- **Try this technique on a fresh piece of paper. You might want to sketch in the contour outline of a purse, sofa etc. for inspiration.**



# Final Exercise

**Time: 25 minutes**

- Take a piece of coloured construction paper.
- Try emulating the car design that is on the screen or shoe design that you see on the split screen.
- Use pencil crayon, 'farkles' and grey marker to complete the drawing



1.



149.



# Final Exercise

