

Skyscrapers Drawn Without a Ruler

Materials:

paper

pencils

cardboard straightedge longer than the length of the paper

small cardboard rectangles

1. make a dot at the top of the page (this is the 1pt. vanishing point)
2. use two sides of the small rectangles as edges for the top of the skyscrapers and trace two top edges. make five tops of buildings.
3. begin with the bottom two sided rectangle. use straightedge to draw lines matched up from the dot at the top of the page from the three corners of the rectangle to the bottom of the page.
4. the buildings are formed with a worms eye view.

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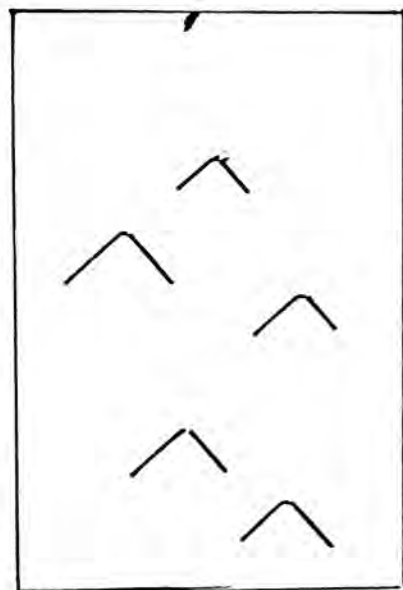
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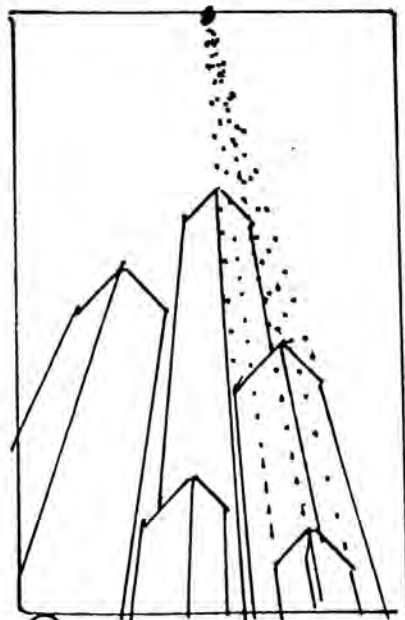
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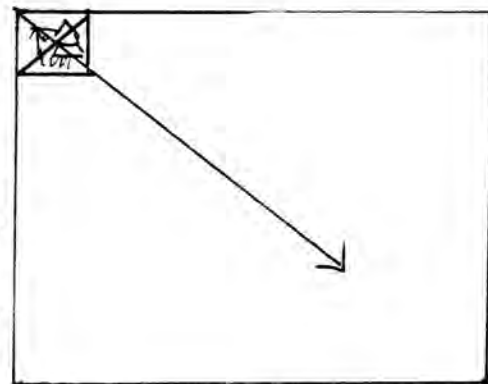
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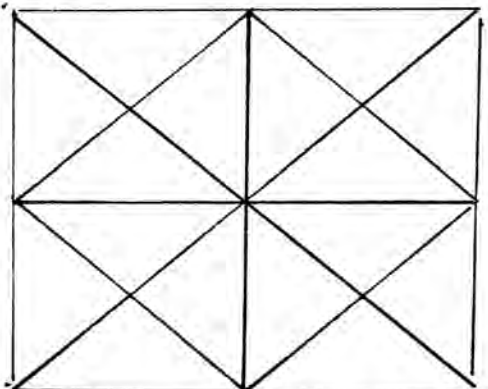
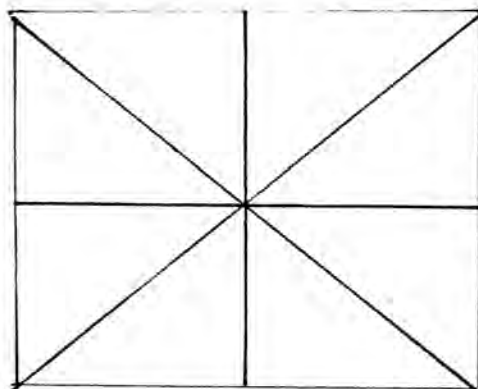
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Enlarging a picture

Many students have difficulty in reading a ruler and using ratios for enlarging a subject. By using a mathematical method of diagonals a grid can be drawn with a straight edge and the subject can be enlarged to any size.



1. Draw a diagonal line from each corner of the picture. The picture now has an "X" across its face. Decide on how big the enlargement will be by continuing the diagonal line to the edge of the paper.



2. Draw vertical and horizontal parallel lines to the sides of the picture through the center of the "X". The picture is now divided into 4 sections or quadrants.

3. Subdivide each section (quadrant) into diagonal and parallel lines. Keep dividing the sections. The smaller the sections the better the proportions will be to the original subject. The picture and paper are now divided into many triangles.

4. Copy each part of the subject in the original picture into the corresponding enlarged triangle.

