

- 1) COLLECT LETTERING & LINETYPE HOMEWORK SHEETS
- 2) TAKE ATTENDANCE
- 3) ANSWER QUES
- 4) REVIEW

i) DRAFTING PAPER SIZES

- a) A  $8\frac{1}{2} \times 11$
- b) B  $11 \times 17$
- c) C  $17 \times 22$
- d) D  $22 \times 34$
- e) E  $34 \times 44$
- f) J  $34 \times \rightarrow$  whatever length

ii) TYPES OF COMMON LEAD

- a) 2H, F, HB, 2B

iii) TYPES OF DRAFTING MEDIA

- a) Detail Paper - similar to regular copy paper
- b) Tracing Paper - translucent paper (vellum)
- c) Polyester film - dimensionally stable (mylar)

iv) DRAFTING BOARD EQUIPMENT

- a) T-SQUARE OR DRAFTING MACHINE
- b) DEMONSTRATE USE OF T-SQUARE

v) LINETYPES

————— VISIBLE

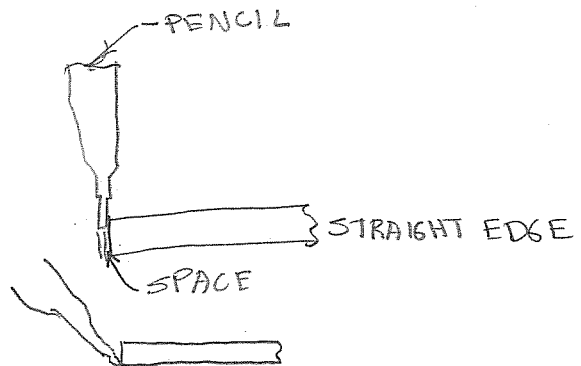
- - - - - HIDDEN

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← 2.20 → DIMENSION & EXTENSION LINES

vi) DRAFTING TRIANGLES

- a) pencil lead position
- b)  $30^\circ - 60^\circ$  TRIANGLE
  - i) used to construct lines spaced at  $30^\circ$  intervals throughout  $360^\circ$



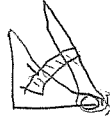
- c)  $45^\circ$  TRIANGLE
  - i) Construct  $45^\circ$  intervals throughout  $360^\circ$
- d) 30-60 with  $45^\circ$  triangle
  - i) construct angles at  $15^\circ$  intervals

500 SHEETS, FILLER, 5 SQUARE  
 50 SHEETS, EYE CASE, 5 SQUARE  
 42-381 100 SHEETS, EYE CASE, 5 SQUARE  
 42-382 200 SHEETS, EYE CASE, 5 SQUARE  
 42-392 100 RECYCLED WHITE, 5 SQUARE  
 42-399 200 RECYCLED WHITE, 5 SQUARE  
 13-782  
 42-381  
 42-382  
 42-392  
 42-399  
 MADE IN U.S.A.



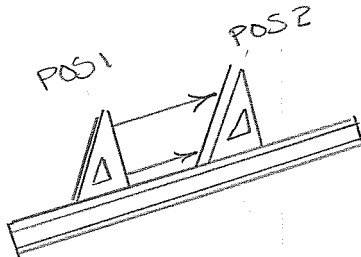
vii) PROTRACTOR

- a) FOR LINES OTHER THAN 15°
- b) AVAILABLE in 180° OR 360°
- c) ADJUSTABLE

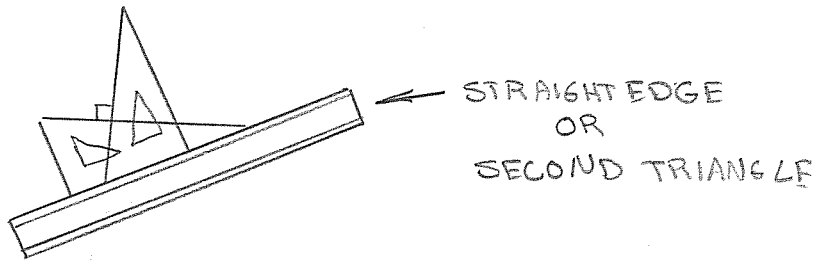


viii) PARALLEL LINES

- a) Straightedge and triangle

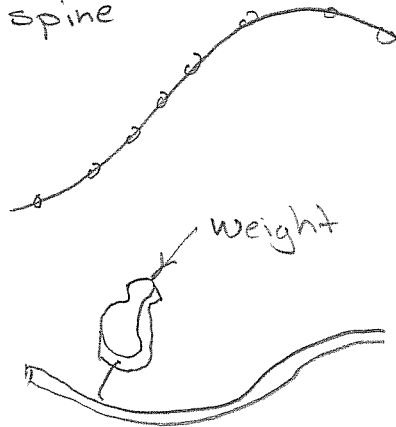


ix) PERPENDICULAR LINES 30°-60° TRIANGLE



x) IRREGULAR CURVES

- a) irregular Curve
- b) flexible spine



xi) ERASING

- a) eraser shield
- b) dusting brush (do not use hand)
- c) softest eraser that will serve the purpose (eroding paper)

13-782 500 SHEETS, FILLER, 5 SQUARE  
 42-381 50 SHEETS, EYE LEAS, 5 SQUARE  
 42-382 100 SHEETS, EYE LEAS, 5 SQUARE  
 42-383 200 SHEETS, EYE LEAS, 5 SQUARE  
 42-384 100 SHEETS, EYE LEAS, 5 SQUARE  
 42-385 100 RECYCLED, WHITE, 5 SQUARE  
 42-389 200 RECYCLED, WHITE, 5 SQUARE  
 Made in U.S.A.



xii) SCALES

- a) Architects' Scale (cabinets, plumbing, electrical, indoor measurements)
  - i) FULL 1/8" = 1" SCALE feet and inches
  - ii) HALF SIZE 1/4" = 1" SCALE
  - iii) 3:1
  
- b) Engineers Scale (outdoor projects, streets, structures, land measurements)
  - i) decimal scale (multiple of ten units)
  - ii) 1" = 1'
  - iii) 1" = 200'
  - iv) 1" = 4'
  - v) 1" = 50'

xiii) ENGLISH SYSTEM

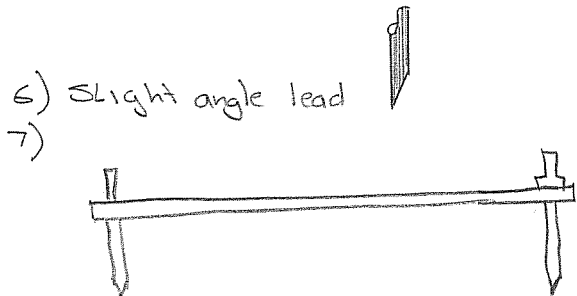
- a) United States, Britain, Canada.

xiv) METRIC SYSTEM

- a) Metric System

xv) THE INSTRUMENT SET

- a) Compass
  - i) circles and arcs
    - 1) dividers
    - 2) lead box
    - 3) needle box
    - 4) extension bar
    - 5) large bow compass
- b) Dividers



xvi) Ellipse Template / Circle Template

- xvii) Drawing Scale
  - a) layout drawing
  - b) think about how much room is needed for

xviii) LETTERING

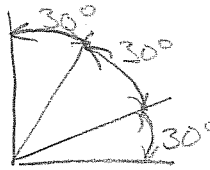
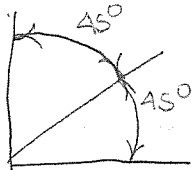
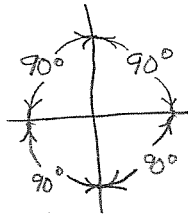
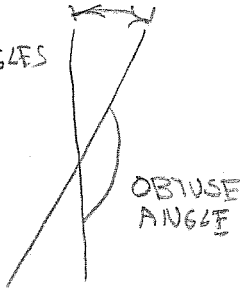
- a) vertical (random) guidelines
- b) horizontal guidelines
- c) AMES LETTERING GUIDE
  - i) Capitals
  - ii) lower case

15-782 500 SHEETS, FILLER, 5 SQUARE  
 42-381 50 SHEETS, V. E. PAPER, 5 SQUARE  
 42-382 100 SHEETS, V. E. PAPER, 5 SQUARE  
 42-383 200 SHEETS, V. E. PAPER, 5 SQUARE  
 42-384 100 SHEETS, V. E. PAPER, 5 SQUARE  
 42-385 200 SHEETS, V. E. PAPER, 5 SQUARE  
 42-386 100 RECYCLED WHITE, 5 SQUARE  
 42-387 200 RECYCLED WHITE, 5 SQUARE  
 MADE IN U.S.A.



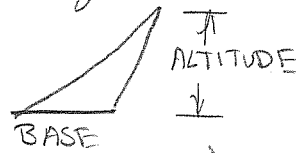
### 5) GEOMETRIC CONSTRUCTION

i) ANGLES

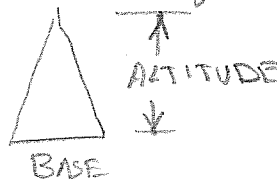


ii) TRIANGLES (3 SIDED POLYGON) (180°)

a) Scalene (no two equal sides)



b) Iso sceles (two sides equal)

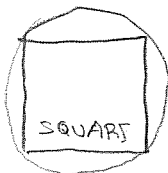


c) EQUILATERAL (ALL SIDES EQUAL)



$$AREA = \frac{A \times B}{2}$$

iii) QUADRILATERAL (4-SIDED FIGURE OF ANY SHAPE)  
SUM OF ANGLES IS 360°

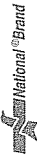


iv) POLY GONS (A regular polygon can be inscribed in a circle)  
SIDES S = (n-2) X 180°

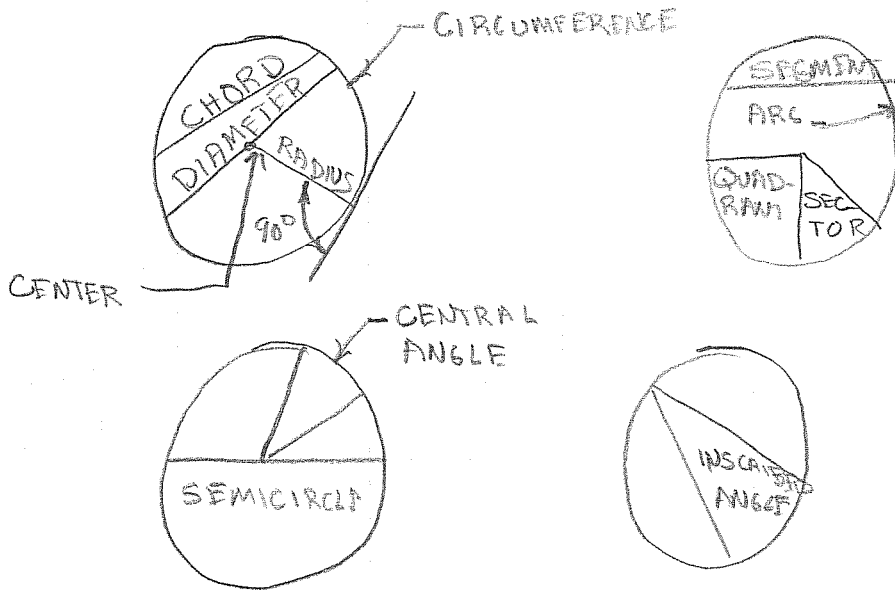


where n = number of sides of polygon  
s = sum of angles inside any polygon

13-782  
42-381  
42-382  
42-383  
42-384  
42-385  
42-386  
42-387  
42-388  
42-389  
500 SHEETS, FILLER, 5 SQUARE  
50 SHEETS, 6 VEILINGS, 5 SQUARE  
100 SHEETS, 6 VEILINGS, 5 SQUARE  
100 SHEETS, 6 VEILINGS, 5 SQUARE  
100 RECYCLED WHITE, 5 SQUARE  
200 RECYCLED WHITE, 5 SQUARE  
Made in U.S.A.

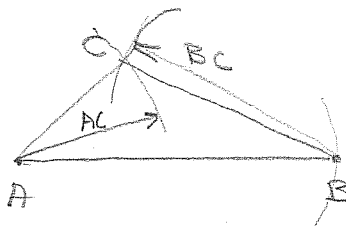
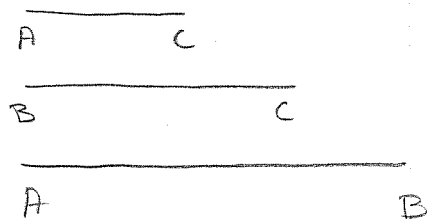


v) Elements of Circles

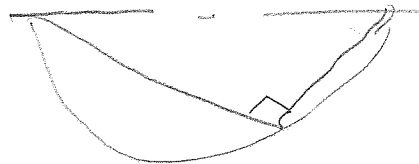
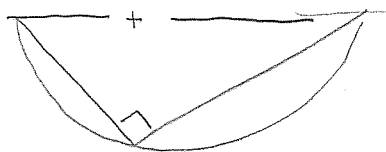


vi) Constructing Triangles

When three sides of a triangle are given, the triangle may be constructed using a compass. Only one triangle can be found when the sides are given by this method, called triangulation.



A right triangle can be constructed by inscribing it in a semicircle. Any triangle inscribed in a semicircle will always be a right triangle.



13,750  
42-391  
42-382  
42-389  
42-393  
500 SHEETS, FULLER, 5 SQUARE  
50 SHEETS, EYE GLASS, 5 SQUARE  
100 SHEETS, EYE GLASS, 5 SQUARE  
200 SHEETS, EYE GLASS, 5 SQUARE  
200 SHEETS, EYE GLASS, 5 SQUARE  
200 RECYCLED WHITE, 5 SQUARE

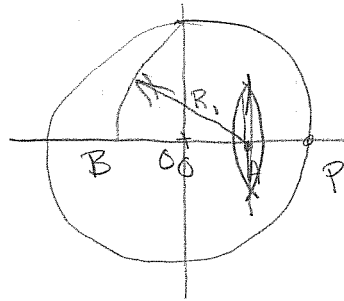


Made in U.S.A.

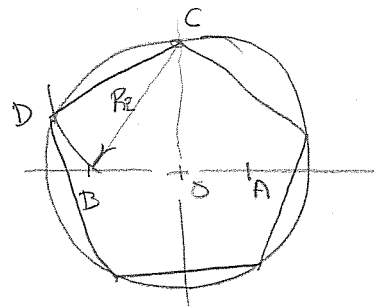
vii) PENTAGONS

- a) 5 sided regular polygon
- b) can be inscribed or circumscribed about a circle
- c) constructed with a compass and straightedge

Step 1: Bisect radius  $OP$  to locate Point  $A$ . With  $A$  as the center and  $AC$  as the radius  $R_1$ , locate point  $B$  on the diameter.

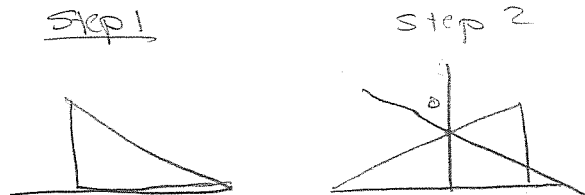
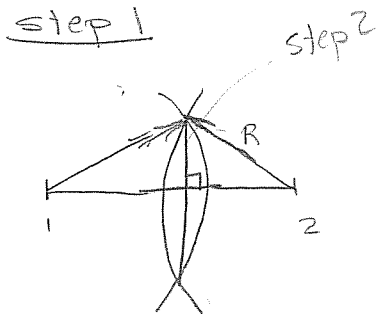


Step 2: With point  $C$  as the center and  $BC$  as the radius  $R_2$ , locate point  $D$  on the arc. Line  $CD$  is the chord that can be used to locate the other corners of the pentagon.

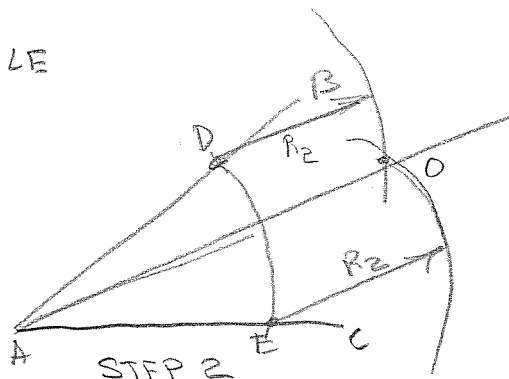
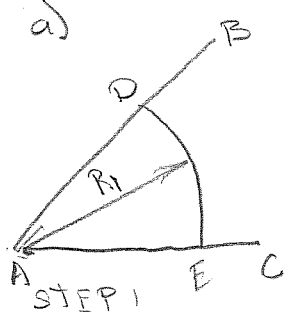


viii) BISECTING A LINE

- a) A line can be bisected by a compass and any radius
- b) A line can be bisected by a standard triangle and a straightedge.



ix) BISECTING AN ANGLE



HOME WORK:

FIGURE 11.63 8  
PG 138

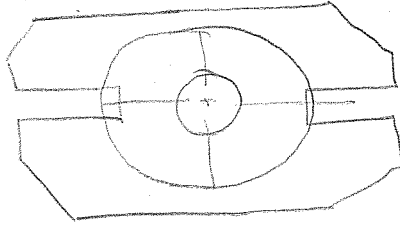
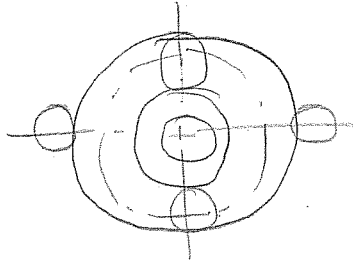
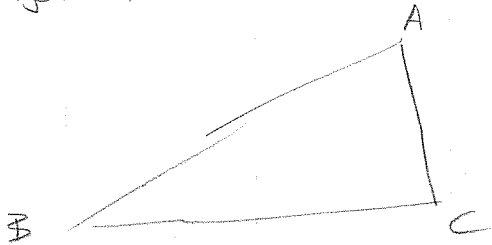


FIGURE 11.65 11  
PG 138



Problem 1A FIGURE B.64  
Page 169



Problem 2D Figure B.65  
Page 169

13-792 500 SHEETS, FILLER, 5 SQUARE  
 42-381 50 SHEETS, EYE GLASS, 5 SQUARE  
 42-382 100 SHEETS, EYE GLASS, 5 SQUARE  
 42-383 200 SHEETS, EYE GLASS, 5 SQUARE  
 42-384 100 SHEETS, EYE GLASS, 5 SQUARE  
 42-385 100 RECYCLED WHITE, 5 SQUARE  
 42-389 200 RECYCLED WHITE, 5 SQUARE  
 Made in U.S.A.

