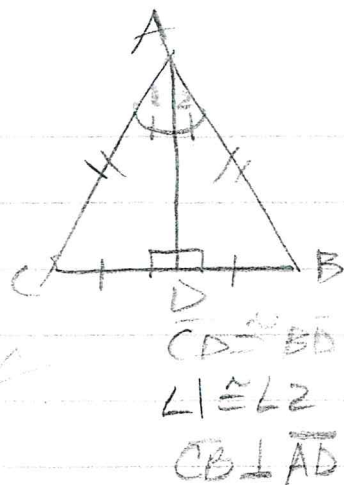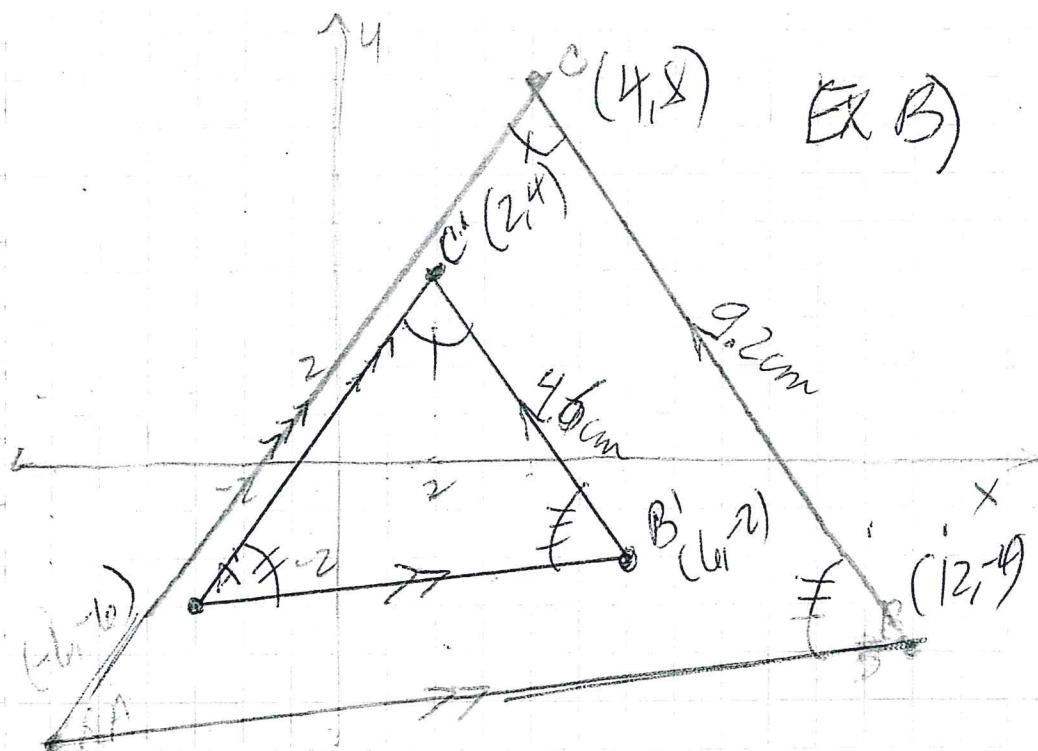C-28 Vertex Angle Bisector in
In an isosceles △, the bisector
of the vertex angle is also
an altitude, a median, and
a perpendicular bisector of
the base.
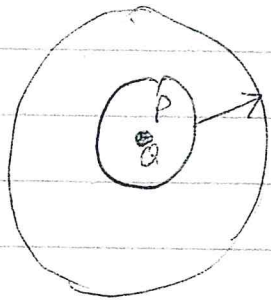

$CD \cong BD$
$\angle 1 \cong \angle 2$
$CB \perp \overline{AD}$

Dilation   Chapter 7 — Dilation/Similarity
P 371   a non-rigid transformation that enlarges
or reduces a geometric figure by a scale factor
relative to a point.
On the grid: $(x,y) \rightarrow (rx, ry)$
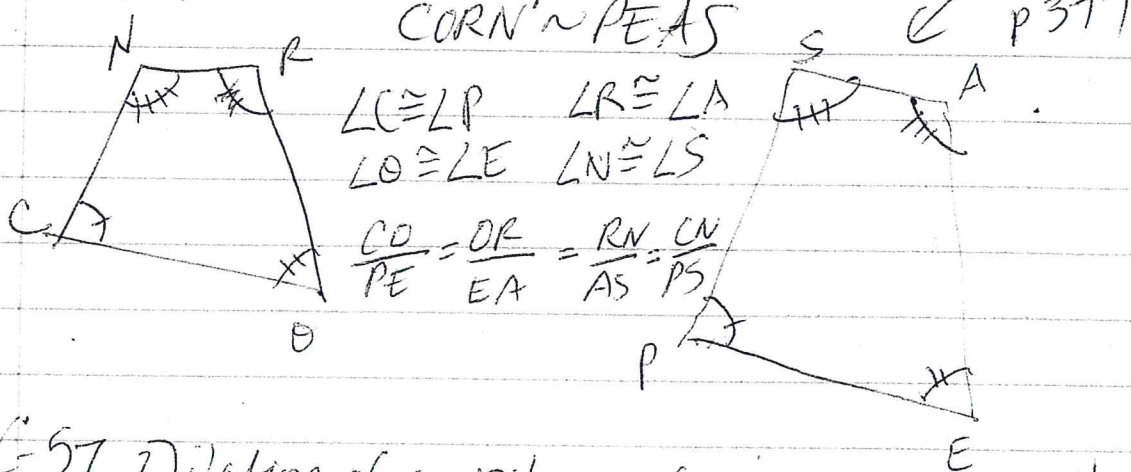r=1 congruent   r<1 reduce   r>1 enlarge

EX B)

C p372 - Dilation of Circles + C-58
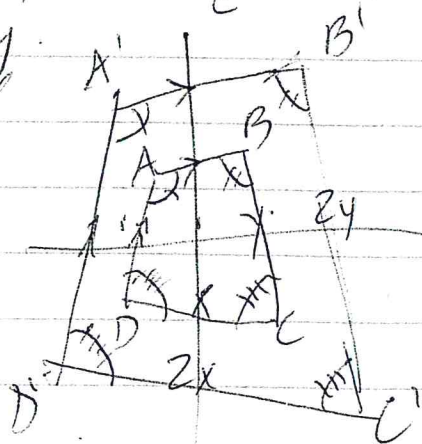All circles are dilations of each other.
(are similar)

p 374 - Similar polygon   (see sketch for
polygons with   ~~dilation on~~
congruent corresponding angles ~~previous page~~
and proportional corresponding sides.
              CORN ~ PEAS   ↙ p377

$\angle C \cong \angle P$ $\angle R \cong \angle A$
$\angle O \cong \angle E$ $\angle N \cong \angle S$

$$\frac{CO}{PE} = \frac{OR}{EA} = \frac{RN}{AS} = \frac{CN}{PS}$$

C-57 Dilation of a polygon Conj.
p375 If one polygon is the dilated
image of another, then the polygons
are similar.
   EX) $(x,y) \rightarrow (2x, 2y)$
        dilate w/ scale factor
              of 2.

Similar figures

Two geometric figures are similar if you can map one exactly onto another by a sequence of rigid transformations and/or dilations.

ratio - an expression that compares 2 quantities by division $\frac{a}{b}$ a to b   a:b

proportion - a statement of equality between two ratios   EX) $\frac{6}{18} = \frac{1}{3}$