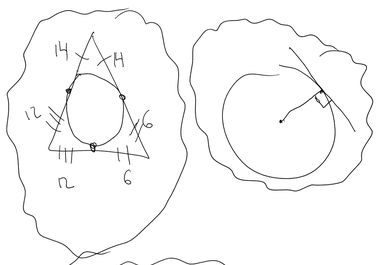
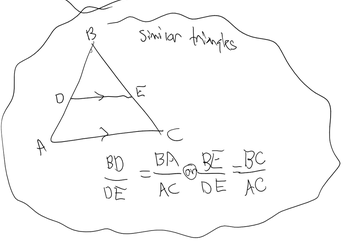
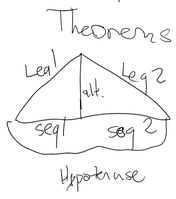
New Notes





$$\frac{BD}{DE}=\frac{BA}{AC}\text{ or }\frac{BE}{DE}=\frac{BC}{AC}$$

Mean Proportional Theorems



$$\frac{\text{hypotenuse}}{\text{leg 1 (2)}}=\frac{\text{leg 1 (2)}}{\text{seg 1 (2)}}$$

or

$$\frac{\text{seg 1}}{\text{alt}}=\frac{\text{alt}}{\text{seg 2}}$$

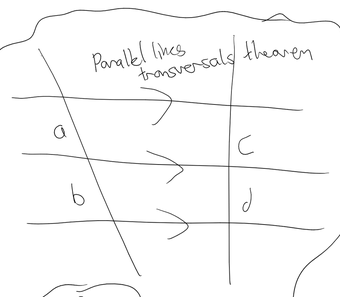
Direct isometry preserves orientation

Get this arc, half it and subtract from 180

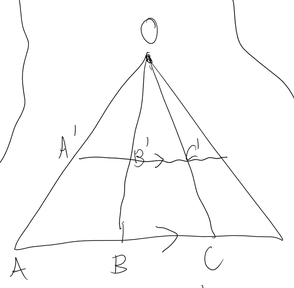
180 − 50 = 130 = 4PTH

WHEN alt ⊥ is drawn from right angle of a right triangle to the hypotenuse then the two smaller triangles created are similar to one another and the bigger triangle just have to look and see which ones longer, etc.

Parallel lines transversals theorem



$$\frac{a}{b}=\frac{c}{d}$$



$$\frac{A'B'}{AB}=\frac{BC'}{BC}$$

$r_{y=x}=(y,x)$

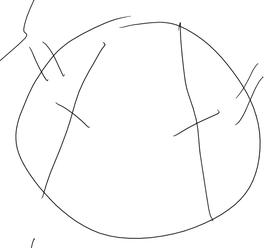
$r_{y=-x}=(-y,-x)$

$R_{0,90}(-y,x)$

$R_{0,180}(-x,-y)$

$R_{0,270}(y,-x)$

Positive = counterclockwise
Negative = clockwise



Inscribe
⊥ bisectors to construct

circumscribe, O is perpendicular bisectors

Chords ≅
arcs ≅

Parallel lines cut ≅ arcs

rhombus & square

$$\frac{\text{diagonal} \times \text{diagonal}}{2}$$

Trapezoid

$$\frac{\text{base 1} + \text{base 2}}{2}h$$

Surface area of cone

$$\pi r(r+\sqrt{h^2+r^2})$$

$\pi r\sqrt{h^2+r^2}$ for lateral area