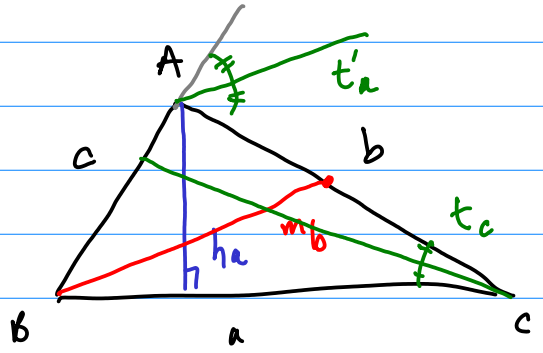
M621 8/29

§1.5 – Constructions of Triangles

Notation



$s = \frac{1}{2}(a+b+c)$ semi-perimeter

Heron's thm:

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

$p = 2s = a+b+c$

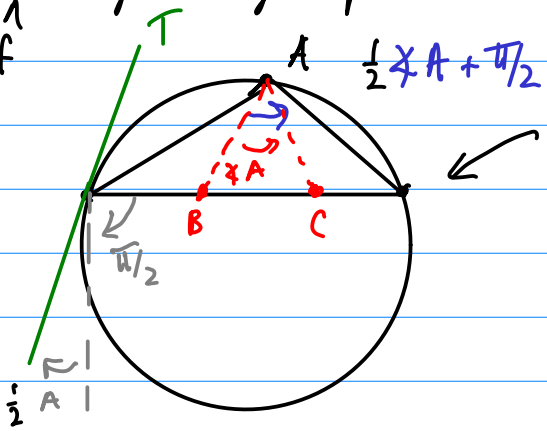
Ex. ——— ——— ———

h_a m_a a

– On chalkboard

Thm. 1.5.1 Given the perimeter and an angle, the locus of all possible vertices of this angle lies on the circle in which a chord equal in length to the perimeter subtends an angle of the given angle plus $\pi/2$.

half ↑



Length is $p = a+b+c$

Ex. 3 1.5.1 a, b, c

a

b

c