

Geometry - Exercises (2 pages; 19/2/20)

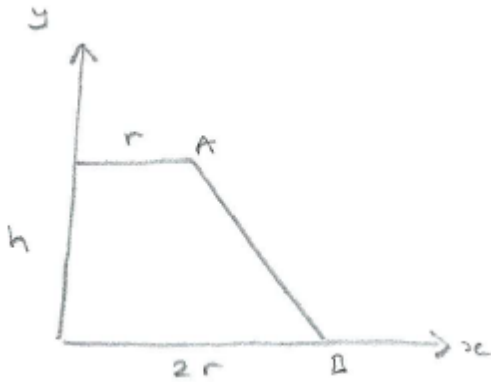
Key to difficulty:

* easier

** moderate

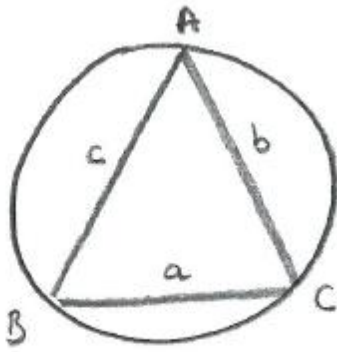
*** harder

(1**) Find as many ways as possible of deriving the equation of the sloping side of the trapezium shown below.



(2***) Find the equation of the circle passing through the points A (2,8) , B (7,3) and D (5,7)

(3***) ABC is a triangle circumscribed by a circle of radius R, as shown in the diagram below.



Show that (i) $\frac{a}{\sin A} = 2R$ (ii) the area of the triangle is $\frac{abc}{4R}$

(4***) Angle Bisector Theorem

Referring to the diagram below, the Angle Bisector theorem says that

$$\frac{BD}{DC} = \frac{AB}{AC}$$

Prove the Angle Bisector Theorem.

