Propuesto por Ricard Peiró i Estruch Profesor de Matemáticas del IES "Abastos" (València)

El profesor Ricard Peiró tiene tiene una página Web

Problema 746

38.- Donat un triangle isòsceles i un punt variable M sobre la base . Demostreu que AM2 +(CM MB) és constant.

38. Dado un triángulo isósceles y un punto variable M sobre la base . Demostrar que AM2 + (CM MB) es constante.

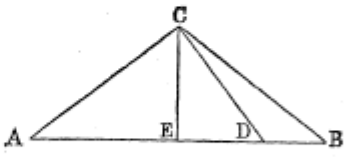
PAPELIER, G. (1953) "Exercices de Géométrie Moderne" Tome 1.Librarie Vuibert. París(p.32).

BOOK SECOND.

SECTION I.

Additional Propositions.

Prop. 1.—*If* ABC *be an isosceles triangle, whose equal sides are* AC, BC ; *and if* CD *be a line drawn from* C *to any point* D *in the base* AB ; *then* $AD \cdot DB = BC^2 - CD^2$.



Dem.—Let fall the ⊥ CE ; then AB is bisected in E and divided unequally in D ;

therefore	$AD \cdot DB + ED^2 = EB^2$;	
adding to each side	EC^2 ;	
therefore	$AD \cdot DB + CD^2 = BC^2$;	(I. xlvii.
therefore	$AD \cdot DB = BC^2 - CD^2$.	

Cor.—If the point be in the base produced, we shall have $AD \cdot BD = CD^2 - CB^2$. If we consider that DB changes its sign when D passes through B, we see that this case is included in the last.