Mathematics 2260H – Geometry I: Euclidean Geometry
Trent University, Winter 2024
Assignment #8
Cevians
Due* just before midnight on Friday, 15 March.

A *cevian* of a triangle is a line joining a vertex to a point on (an extension of) the opposite side.

1. Given a triangle, show that if a cevian of a triangle is any two of
   i. a median of the triangle,
  ii. the bisector of an internal angle of the triangle, or
 iii. a perpendicular bisector of a side of the triangle,
then it is also the third, and that the triangle is isosceles. *[10]*

On Problems

Our choicest plans
    have fallen through,
our airiest castles
    tumbled over,
because of lines
    we neatly drew
and later neatly
    stumbled over.

Another grook by Piet Hein.