

TRISECTING AN ANGLE

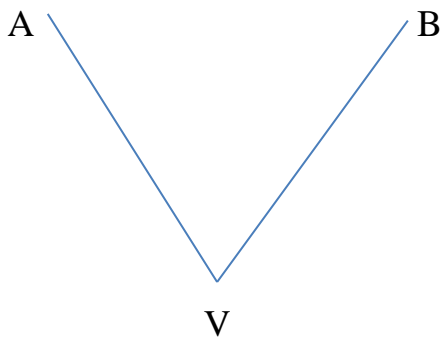
This question reminded me of a young, very keen 11year-old student I taught many years ago.

Whenever I taught “geometric constructions” I would always mention that nobody has ever worked out a method, using compasses and ruler, to TRISECT an angle. **(I did not just say that it was impossible!)**

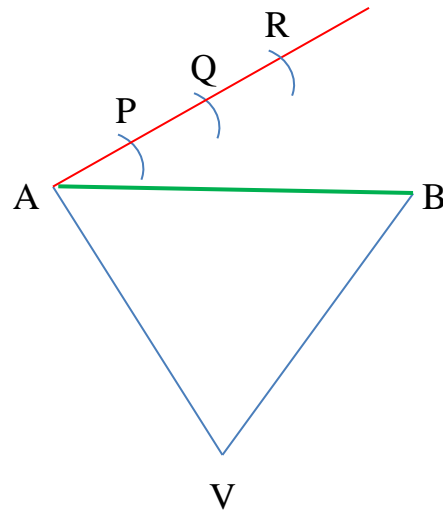
Well this young chap took the challenge and came up with a very impressive method for a mere 11year-old.

Here is his wonderful method...

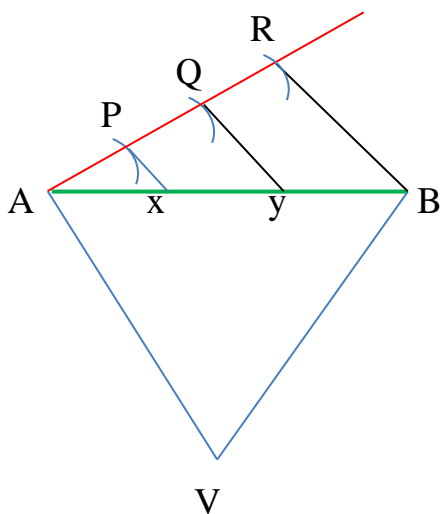
Step 1. Draw any angle AVB so that $AV = VB$



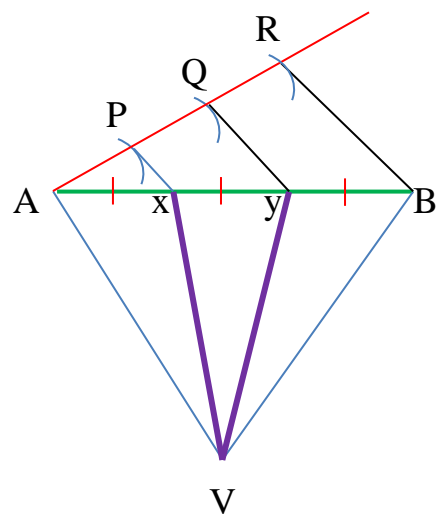
Step 2. Draw AP at any angle as below and mark off 3 equal lengths with the compass from A. Join AB



Step 3. Join R to B then construct lines from Q and P parallel to RB



Step 4. Finally, join X to V and Y to V



I did not have the heart to tell him that the middle angle is larger than the outer two.

I just told him I was very impressed and I showed it to all my colleagues who were also very impressed!

Incidentally, he went on to become an eminent mathematician!