

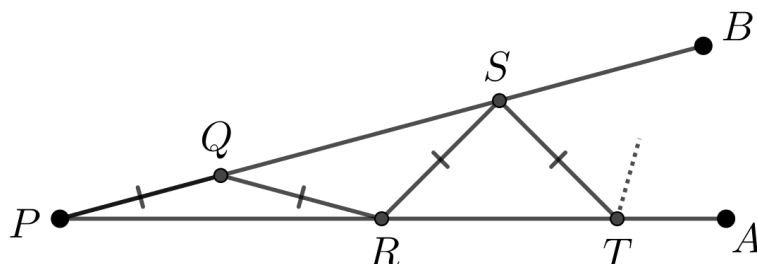


## Problem of the Week

### Problem C

#### Back and Forth

Line segments  $BP$  and  $AP$  are such that  $\angle BPA = 12^\circ$ . Points  $Q, R, S, T, \dots$  alternate from one arm of the angle to the other, with  $Q$  on  $BP$  and  $R$  on  $AP$ , such that each point is located farther away from  $P$  than the point before, and  $PQ = QR = RS = ST = \dots$



This creates isosceles triangles  $\triangle PQR$ ,  $\triangle QRS$ ,  $\triangle RST$ , and so on. Eventually, one of the isosceles triangles will also be an equilateral triangle.

How many isosceles triangles will be created before the equilateral triangle is created?