Bisecting An Angle Continuously

Bisecting a 60° angle continuously

CONSTRUCTION:

First draw a line segment EF of line L. Release your compasses to an appropriate separation and using E as center, construct an arc to intersect the line segment EF at N. Given the same compasses separation and using N as Centre, construct a second arc or curve to intersect or crisscross the first arc at O. Draw a straight line passing through the points E and O. Therefore angle FEO=60°.

Release your compasses to a bigger separation and with centre N, construct an arc or curve QW to intersect or crisscross the line segment EF at W. We use this same compasses separation throughout. With Centre O, Construct an arc or curve to intersect or crisscross the arc at G. Therefore angle FEG=30°.

With Centre T, construct an arc or curve to intersect or crisscross the arc QW at H. Therefore angle FEH=15°

With S as Centre, construct an arc or curve to intersect or crisscross QW at I. Hence angle FEI=7.5^o