BISECT(U,V, ;P, )

* HAVE PROCEDURE F
* (U,V) STARTING INTERVAL
* P RETURNED AS APPROXIMATE ROOT OF F

• IF U ≥ V RETURN “BAD INTERVAL” and STOP
• FU ← F(U)
• FV ← F(V)
• IF FU*FV ≥ 0 RETURN “BAD INTERVAL” and STOP
• P ← (U+V)/2
• FP ← F(P)

• WHILE [] DO
  – IF FP = 0 THEN RETURN P ELSE
  – IF FP*FU < 0 THEN {V ← P; FV ← FP}
  – ELSE (FP*FV < 0) {U ← P; FU ← FP}
  – P ← (U+V)/2; FP ← F(P)

• END WHILE