

```

01 void guessp(float dl, float ul, float pl, float cl,
02            float dr, float ur, float pr, float cr,
03            float &pm)
04 {
05     float cup, gel, ger, pmax, pmin, ppv, pq, ptl, ptr, qmax, quser, um;
06
07     quser = 2.0;
08
09     cup = 0.25 * (dl + dr) * (cl + cr);
10     ppv = 0.5 * (pl + pr) + 0.5 * (ul - ur) * cup;
11     ppv = (ppv > 0.0) ? ppv : 0.0;
12     pmin = (pl < pr) ? pl : pr;
13     pmax = (pl > pr) ? pl : pr;
14     qmax = pmax / pmin;
15
16     if ((qmax <= quser) && (pmin <= ppv) && (ppv <= pmax))
17     {
18         pm = ppv;
19     }
20     else
21     {
22         if (ppv < pmin)
23         {
24             pq = pow(pl / pr, G1);
25             um = (pq * ul / cl + ur / cr + G4 * (pq - 1.0)) / (pq / cl + 1.0 / cr);
26             ptl = 1.0 + G7 * (ul - um) / cl;
27             ptr = 1.0 + G7 * (um - ur) / cr;
28             pm = 0.5 * (pow(pl * ptl, G3) + pow(pr * ptr, G3));
29         }
30         else
31         {
32             gel = sqrt((G5 / dl) / (G6 * pl + ppv));
33             ger = sqrt((G5 / dr) / (G6 * pr + ppv));
34             pm = (gel * pl + ger * pr - (ur - ul)) / (gel + ger);
35         }
36     }
37 }

```