

```

TriDiagonalSolve := proc(n, a, d, b, f)
  local bI, fI, x, pom, i;
  bI := [seq(0, i = 1 ..n)];
  fI := [seq(0, i = 1 ..n)];
  x := [seq(0, i = 1 ..n)];
  bI[1] := b[1]/d[1];
  fI[1] := f[1]/d[1];
  for i from 2 to n-1 do
    pom := (d[i]-a[i]*bI[i-1]);
    bI[i] := b[i]/pom;
    fI[i] := (f[i]-a[i]*fI[i-1])/pom;
  end do;
  fI[n] := (f[n]-a[n]*fI[n-1])/(d[n]-a[n]*bI[n-1]);
  x[n] := fI[n];
  for i from n-1 by -1 to 1 do
    x[i] := fI[i]-bI[i]*x[i+1];
  end do;
  RETURN(x);
end:

```

Příklad na řešení soustavy s třídiagonální maticí

```

TriDiagonalSolve(4, [0, 4, 5, 6], [1, 2, 3, 4], [2, 3, 4, 0], [3, 9, 12, 10]);
[1, 1, 1, 1]

```

(1.1)