```
% a very short main script
format long
x = iqim(@f,0.7,0.8,0.9)

% a very general IQIM program
function sol = iqim(f,x1,x2,x3)
y1 = feval(f,x1);
y2 = feval(f,x2);
y3 = feval(f,x3);
rat = 1;
while rat > 1.0e-10
    A = [1, y2-y3; 1, y1-y3];
    b = [(x2-x3)/(y2-y3); (x1-x3)/(y1-y3)];
    c = A\b;
    dx = -c(1)*y3+c(2)*y3^2;
    x4 = x3 + dx;
    y4 = feval(f,x4);
    rat = abs(dx/x4);
    x1=x2; x2=x3; x3=x4;
    y1=y2; y2=y3; y3=y4;
end
sol = x4;
end

% a particular function
function y=f(x)
y = x^7-cos(x);
end
```

```
x =

   0.929273104148150
```

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