clear;

a = 0;b = 1;h = 0.2;d = 1;

n = (b-a)/h;x0 = a;x1 = a;y0 = d;

result(1,1) = x0;

result(2,1) = y0;

for m = 0:n-1

x1 = x1 + h;

f0 = y0-2\*x0/y0;

d = y0 + h\*f0;

f1 = d - 2\*x1/d;

y1 = y0 + h/2\*(f0+f1);

x0 = x1;y0 = y1;

result(1, m+2) = x0;

result(2, m+2) = y0;

end

x = result(1,:);

y = result(2,:);

z = [1, 1.1832, 1.3416, 1.4832, 1.6125, 1.7321];

y(2,:) = z;

subplot(2,2,1)

plot(x, y);

clear;

a = 0;b = 1;h = 0.1;d = 1;

n = (b-a)/h;x0 = a;x1 = a;y0 = d;

result(1,1) = x0;

result(2,1) = y0;

for m = 0:n-1

x1 = x1 + h;

f0 = y0-2\*x0/y0;

d = y0 + h\*f0;

f1 = d - 2\*x1/d;

y1 = y0 + h/2\*(f0+f1);

x0 = x1;y0 = y1;

result(1, m+2) = x0;

result(2, m+2) = y0;

end

x = result(1,:);

y = result(2,:);

z = [1, 1.0954, 1.1832, 1.2649, 1.3416, 1.4142, 1.4832, 1.5492, 1.6125, 1.6733, 1.7321];

y(2,:) = z;

subplot(2,2,2)

plot(x, y);

clear;

a = 0;b = 1;h = 0.5;d = 1;

n = (b-a)/h;x0 = a;x1 = a;y0 = d;

result(1,1) = x0;

result(2,1) = y0;

for m = 0:n-1

x1 = x1 + h;

f0 = y0-2\*x0/y0;

d = y0 + h\*f0;

f1 = d - 2\*x1/d;

y1 = y0 + h/2\*(f0+f1);

x0 = x1;y0 = y1;

result(1, m+2) = x0;

result(2, m+2) = y0;

end

x = result(1,:);

y = result(2,:);

z = [1, 1.4142, 1.7321];

y(2,:) = z;

subplot(2,2,3)

plot(x, y);

clear;

a = 0;b = 1;h = 0.1;d = 1;

n = (b-a)/h;x0 = a;x1 = a;y0 = d;

result(1,1) = x0;

result(2,1) = y0;

for m = 0:n-1

x1 = x1 + h;

f0 = y0-2\*x0/y0;

d = y0 + h\*f0;

f1 = d - 2\*x1/d;

y1 = y0 + h/2\*(f0+f1);

x0 = x1;y0 = y1;

result(1, m+2) = x0;

result(2, m+2) = y0;

end

x = result(1,:);

y = result(2,:);

z = [1, 1.09, 1.18, 1.26, 1.34, 1.41, 1.48, 1.54, 1.61, 1.67, 1.73];

y(2,:) = z;

subplot(2,2,4)

plot(x, y);