
```
clc;clear;close all;
```

```
R = 3;
V_target = 30;
h = 1.5;
iterations = 100;
errors = zeros(1, iterations);

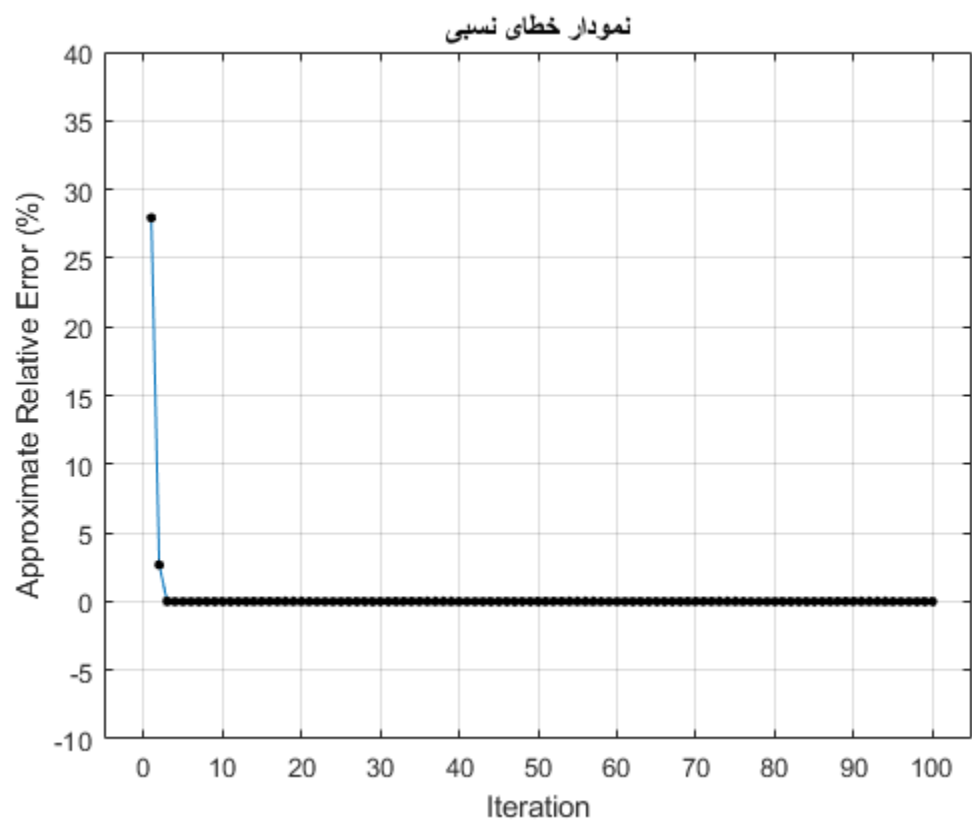
for i = 1:iterations
    V = pi .* h.^2. * (3 .* R - h) ./ 3;
    f = V - V_target;
    f_prime = pi .* h .* (6 .* R - 3 .* h) ./ 3;
    h_new = h - f ./ f_prime;
    errors(i) = abs((h_new - h) ./ h_new) .* 100;
    h = h_new;
end
```

```
disp(['final h: ' num2str(h)])
```

```
plot(1:iterations, errors, Marker="o", MarkerFaceColor="k",
MarkerEdgeColor='k',...
    MarkerSize=3)
xlabel('Iteration')
ylabel('Approximate Relative Error (%)')
ylim([-10 40])
xlim([-5 105])
grid on
title('نمودار خطای نسبی')
```

```
%-----
```

```
final h: 2.0269
```



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