

Experiment 6

>> **MATLAB Code**

Code I:

diffy.m

```
function [ydash] = diffy(x,y)
    ydash = y/x;
end
```

Experiment_6

```
yspan = [-10 10];
y0 = 1;
[x,y] = ode23('diffy',yspan,y0);
plot(x,y,'r*')
ysol = y(3)
grid;
title('Ode23');
```

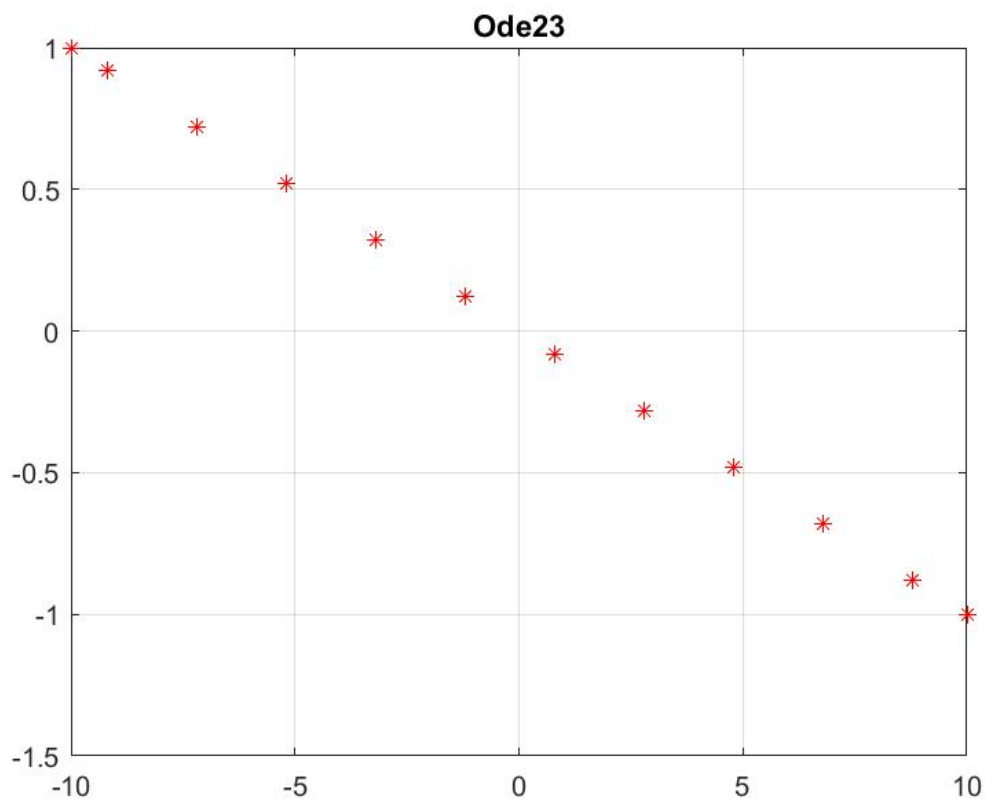
>> **Command Window**

Experiment_6

ysol =

0.7200

>> **Graph**



Code II:

diffy.m

```
function [ydash] = diffy(x,y)
    ydash = y/x;
end
```

Experiment_6_2

```
yspan = [-10 10];
y0 = 1;
[x,y] = ode45('diffy',yspan,y0);
plot(x,y,'r*')
ysol = y(3)
grid;
title('Ode45');
```

>> Command Window

Experiment_6_2

ysol =

0.9000

>> Graph

