
```

%Define vector for time
t=[0:20]
%Now, I create a vector that is related to the free_fall function, and
%evaluate it with respect to t, which we just defined
[distance, velocity, acceleration]=free_fall(t)

%Next, I create subplots to plot all the graphs
subplot(2,2,1)
plot(t, distance)
xlabel('Time, seconds'), title('Distance vs Time'), ylabel('Distance,
    meters')

subplot(2,2,2)
plot(t, velocity)
xlabel('Time, seconds'), title('Velocity vs Time'), ylabel('Velocity,
    m/s')

subplot(2,2,3)
plot(t, acceleration)
xlabel('Time, seconds'), title('Acceleration vs Time'),
    ylabel('Acceleration, m/s^2')

```

```
t =
```

```
Columns 1 through 13
```

```

    0     1     2     3     4     5     6     7     8     9    10
11    12

```

```
Columns 14 through 21
```

```

    13    14    15    16    17    18    19    20

```

```
distance =
```

```
1.0e+03 *
```

```
Columns 1 through 7
```

```

    0    0.0049    0.0196    0.0441    0.0784    0.1225    0.1764

```

```
Columns 8 through 14
```

```

    0.2401    0.3136    0.3969    0.4900    0.5929    0.7056    0.8281

```

```
Columns 15 through 21
```

```

    0.9604    1.1025    1.2544    1.4161    1.5876    1.7689    1.9600

```

velocity =

Columns 1 through 7

0	9.8000	19.6000	29.4000	39.2000	49.0000	58.8000
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Columns 8 through 14

68.6000	78.4000	88.2000	98.0000	107.8000	117.6000	127.4000
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Columns 15 through 21

137.2000	147.0000	156.8000	166.6000	176.4000	186.2000	196.0000
----------	----------	----------	----------	----------	----------	----------

acceleration =

Columns 1 through 7

9.8000	9.8000	9.8000	9.8000	9.8000	9.8000	9.8000
--------	--------	--------	--------	--------	--------	--------

Columns 8 through 14

9.8000	9.8000	9.8000	9.8000	9.8000	9.8000	9.8000
--------	--------	--------	--------	--------	--------	--------

Columns 15 through 21

9.8000	9.8000	9.8000	9.8000	9.8000	9.8000	9.8000
--------	--------	--------	--------	--------	--------	--------

distance =

1.0e+03 *

Columns 1 through 7

0	0.0049	0.0196	0.0441	0.0784	0.1225	0.1764
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Columns 8 through 14

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Columns 15 through 21

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Columns 1 through 7

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Columns 8 through 14

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Columns 15 through 21

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137.2000    147.0000    156.8000    166.6000    176.4000    186.2000    196.0000

```

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acceleration =

```

```

Columns 1 through 7

```

```

9.8000    9.8000    9.8000    9.8000    9.8000    9.8000    9.8000

```

```

Columns 8 through 14

```

```

9.8000    9.8000    9.8000    9.8000    9.8000    9.8000    9.8000

```

```

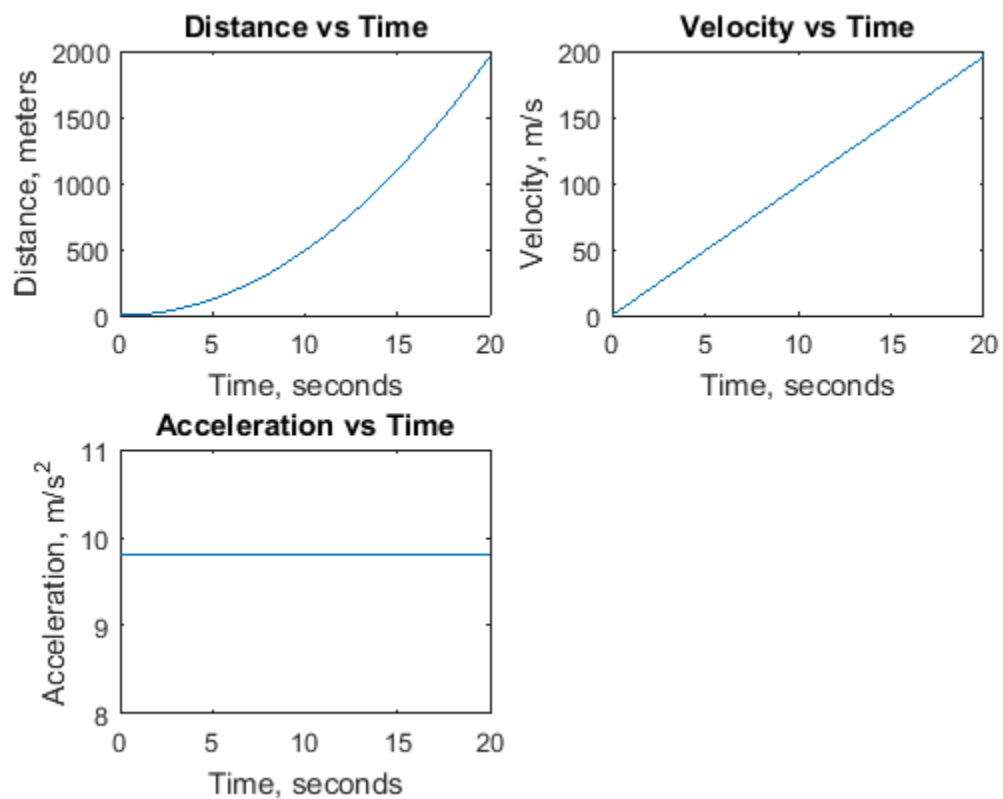
Columns 15 through 21

```

```

9.8000    9.8000    9.8000    9.8000    9.8000    9.8000    9.8000

```



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