```
%Newton's law of universal gravitation
%Define givens
G=6.673*10^-11; M=6*10^24; m=7.4*10^22; r=3.9*10^8;
%Solve for F
F=(G*M*m)/(r^2)

%Define new givens
d=linspace(3.8*10^8, 4.0*10^8, 10);
%Solve for F2
F2= (G*M*m)./(d.^2)
```

```
F =

   1.9479e+20


F2 =

   1.0e+20 *

  Columns 1 through 7

    2.0518    2.0280    2.0046    1.9817    1.9591    1.9369    1.9151

  Columns 8 through 10

    1.8936    1.8725    1.8518
```

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