

Topics: MATLAB—elementary functions, script file, vector, conditional statement

Reading: MATLAB Essentials, Part I

Example Script file

% Example 1_2: Explore how the surface area of a sphere
% changes with an increase in the radius.

```
r= input('Enter radius r in miles: ');  
delta= input('Enter delta r in inches: ');  
newr= r + ((delta/12)/5280); % new radius in miles  
A= 4*pi*r^2; % original surface area  
newA= 4*pi*newr^2; % new surface area  
incr= newA - A; % increase in area  
fprintf('Increase in area (mile^2) is %f.\n', incr);
```

Example

Given a vector x , calculate its *pair sums* and store them in a vector.

Example

Variable m stores an integer value in $[1..12]$. Write a program fragment to print the number of days in month m . Assume a non-leap year.