Contents


```
function pointcloud = pointcloud(X,Y,Z)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

TAKE X Y Z OUTPUTS FROM A MATLAB FUNCTION LIKE %%%

CYLINDER OR SPHERE AND GENERATE A 3 X N MATRIX %%%

OF POINTS. EACH POINT IS POINTCLOUD(:,N) %%%

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

% Example:

%     >> [X,Y,Z] = cylinder([0.5 0.25 0.5 0.25 0.5],40)
%     >> surf(X,Y,Z)          to see the mutant cylinder
%     >> plot3(X,Y,Z,'.')     to see the rainbow points
%     >> pointcloud(X,Y,Z)    to generate a 3x1681 double of points
%     >> ans(:,n)             to extract nth point in the cloud

interim(:,:,1) = X; interim(:,:,2) = Y; interim(:,:,3) = Z;
dims = size(interim);
pointcloud = reshape(interim,[dims(1)*dims(2),3]);
pointcloud = pointcloud';

end
```

```
Not enough input arguments.

Error in pointcloud (line 17)
interim(:,:,1) = X; interim(:,:,2) = Y; interim(:,:,3) = Z;
```

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