

## Problem 5. Triangle Numbers

Triangle numbers are the sums of successive integers. So 6 is a triangle number because

Example:

```
% 6 = 1 + 2 + 3
```

which can be displayed in a triangular shape like so

```
%      *  
%     * *  
%    * * *
```

Thus  $6 = \text{triangle}(3)$ . Given  $n$ , return  $t$ , the triangular number for  $n$ .

Example:

```
% Input  n = 4  
% Output t is 10
```

### Scratch Pad

```
n = 4
```

```
n = 4
```

```
triangle(n)
```

```
ans = 10
```

### Solution

```
function t = triangle(n)  
    t = n * (n + 1) / 2;  
end
```