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Career Discovery
ETCS 105-M01
MatLab Project II
11/18/15

Illuminating a Room

```
syms x;  
syms y;  
illum = 300 / (4*pi*((x-5)^2 + (y-2)^2 + 3^2))  
ezcontourf(illum, [0 10 0 4]);  
colormap('winter')
```

To find the intensity at the corners:

```
subs(illum, [x, y], [5, 2])  
ans =  
25/(3*pi)
```

To find the intensity at the center:

```
subs(illum, [x, y], [0, 0])  
ans =  
75/(38*pi)
```

```
Trial>> syms x;  
syms y;  
illum = 300/(4*pi*((x-5)^2 + (y-2)^2 + 3^2))  
ezcontourf(illum, [0 10 0 4]);  
colormap('winter')
```

```
illum =
```

```
75/(pi*((x - 5)^2 + (y - 2)^2 + 9))
```

```
Trial>> subs(illum, [x, y], [0, 0])
```

```
ans =
```

```
75/(38*pi)
```

```
Trial>> subs(illum, [x, y], [5, 2])
```

```
ans =
```

```
25/(3*pi)
```

