Lab 2

Question 1

```
A = 30000
```

```
A = 30000
```

```
x = 100
```

```
x = 100
```

```
C = A/x * sqrt(2/(pi*exp(1)))
```

```
C = 145.1824
```

```
x = 1000
```

```
x = 1000
```

```
C = A/x * sqrt(2/(pi*exp(1)))
```

```
C = 14.5182
```

```
x = 2000
```

```
x = 2000
```

```
C = A/x * sqrt(2/(pi*exp(1)))
```

```
C = 7.2591
```

Question 2

```
r = 2
```

```
r = 2
```

```
N = 20
```

```
N = 20
```

```
x = (1-r^N)/(1-r)
```

```
x = 1048575
```

```
y = sum(r.^(0:N-1))
```

```
y = 1048575
```

Question 3

```
theta = 0:pi/16:2*pi
```

```
theta = 1×33
```

```
         0    0.1963    0.3927    0.5890    0.7854    0.9817    1.1781    1.3744 · · ·
```

```
r = 10
```

```
r = 10
```

```
x = r*cos(theta)
```

```
x = 1×33
   10.0000    9.8079    9.2388    8.3147    7.0711    5.5557    3.8268    1.9509 · · ·
```

```
y = r*sin(theta)
```

```
y = 1×33
         0    1.9509    3.8268    5.5557    7.0711    8.3147    9.2388    9.8079 · · ·
```

```
plot(x,y,'O')
xlabel('X-Axis')
ylabel('Y-Axis')
title('Plot Made by Varun Khadayate A016')
```