```
###Question 1:
####Consider the probability density function p(x) =(c/x^4) for x>=1,where c is a cor
### Answer 1:

```{r setup, include=FALSE}
knitr::opts_chunk$set(echo = TRUE)
```


```{r equation1, echo=FALSE}
x=runif(100,min=0,max=1)
a=floor(1/x)
p=3/(a**2)
```

```{r graph1 , echo=FALSE}
b=hist(p,main = "Histogram of Samples",xlab = "Value of Samples")
#plot(b)
```

```{r average1,echo=FALSE}
avg=mean(p)
```

```{r expected1 value, echo =FALSE}
f=function(a){
  3/a**3
}
c=integrate(f,1,Inf)
```
Average value of samples is
```{r print avg1, echo=FALSE}
print(avg)
```
Expected value of X is
```{r print expected1, echo=FALSE}
print(c)
```
```