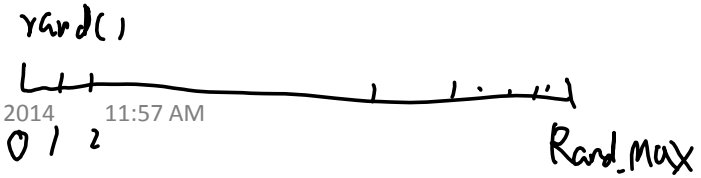

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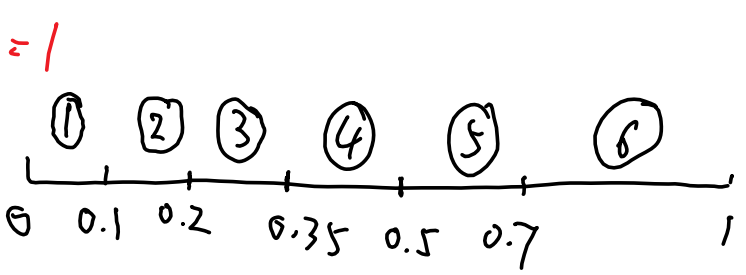
```
temp = double( rand()+0.5 ) /
(double(RAND_MAX) + 1.0);
```

P(1)=0.1; P(2)=0.1; P(3)=0.15; P(4)=0.15
P(5)=0.2; P(6)=0.3




```
X= zeros(1000,1);
for i=1:1000,
    u=rand;
    if(u<0.1)   X(i)=1;
    else if(u<0.2)   X(i)=2;
    elseif(  )       X(i)=3;
     ..
     !!
    else             X(i)=6;
end
```

$y = F(x) = 1 - e^{-\lambda x} = y$

$e^{-\lambda x} = 1 - y$

$-\lambda x = \ln(1-y)$

$x = -\frac{1}{\lambda} \cdot \ln(1-y)$

Q: generate 1000 samples of exp dist. λ

$F^{-1}(x) = -\frac{1}{\lambda}\ln(1-x)$

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```
X = zeros(1,1000);
for i = 1:1000,
    u = rand;
    X(i) = -log(1-u)/λ;
end
```

$\Rightarrow$ `X = -log(1-rand([1,1000]))/λ;`

10 samples of dice throwing

[1, 3, 6, 5, 5, 4, 6, 1, 5, 4]

$P(X=1) = \frac{2}{10}$, $P(X=2) = \frac{0}{10}$, $P(X=i) = \frac{\#\text{ of } i\text{s shw}}{10}$