

$$y = x^2 \quad x = 1 : 0.1 : 10$$

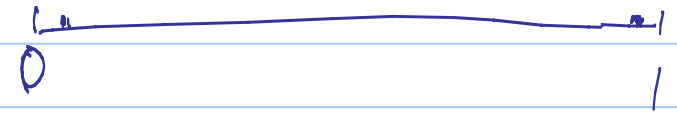
Note Title

9/20/2011

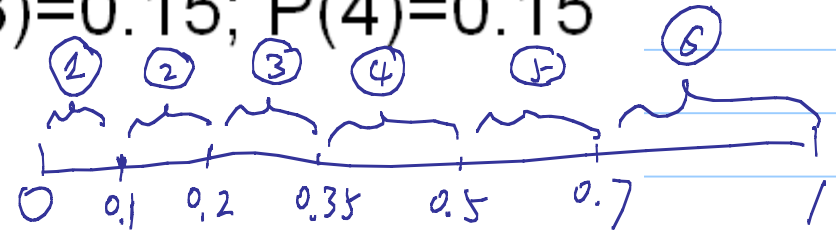
$$U(0,1) \quad 0 < x < 1$$

$$x = \text{rand}() / \text{RAND\_MAX} \quad \times$$

$$x = \frac{\text{rand}() + 0.5}{\text{RAND\_MAX} + 1}$$



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



$$X = \begin{cases} x_0 & \text{if } U < p_0 \\ x_1 & \text{if } p_0 \leq U < p_0 + p_1 \\ \vdots & \\ x_j & \text{if } \sum_{i=0}^{j-1} p_i \leq U < \sum_{i=0}^j p_i \\ \vdots & \end{cases}$$

```

for i=1:1000,
    u = rand;
    if (u < 0.1)    x=1;
    else if (u < 0.2) x=2;
    ...
end
    
```

