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6.040103 –

**2012**

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$$P_n(k), \quad P_5(3)$$

$$k \quad n-k, \quad p^k q^{n-k}$$

$$\dots \frac{k}{n}$$

$$k \quad n \quad )$$

$$P_n(k) = C_n^k p^k q^{n-k} \quad (1)$$

$$P_n(k) = \frac{n!}{k!(n-k)!} p^k (1-p)^{n-k} \quad (2)$$

$$, n - \quad , k -$$

$$\dagger_B = \sqrt{np(1-p)} \quad (3)$$

$p,$

$p$  ( $p \rightarrow 0$ )).

$$P(k) = \frac{\bar{h}^k e^{-\bar{h}}}{k!}, \quad (4)$$

$$\bar{h} = \bar{h} = \bar{h}^2 = Np. \quad (5)$$

$\bar{h} = \bar{h}^2$

**1.**

**2.**

**1.**

38

12

$p \approx 0,32,$

$(1-p) \approx 0,68,$

(2)

(1)

$k$

(1)

10 – 12

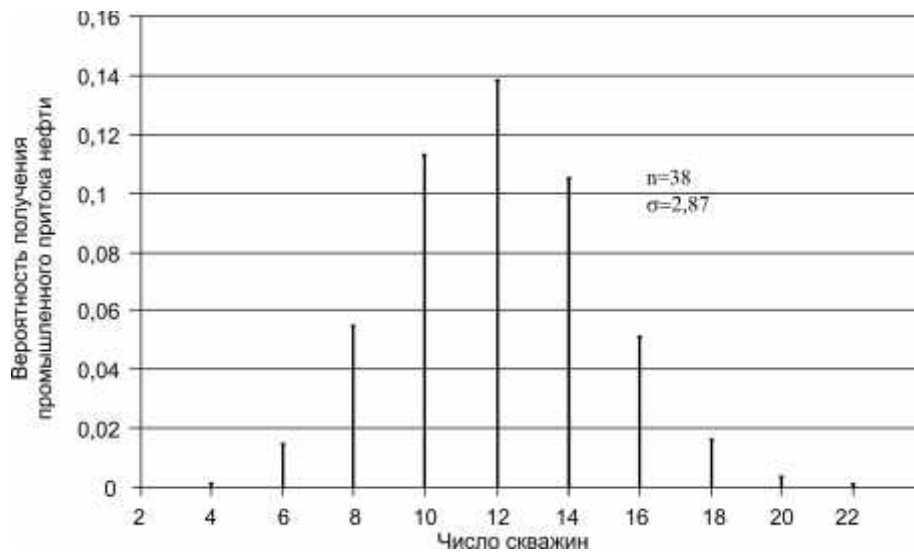
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†  $\approx 2,87$ .

1 –

$k$	$P_n(k)$	$k$	$P_n(k)$
4	0,001828887	14	0,1050817
6	0,01457048	16	0,05148386
8	0,05498119	18	0,01655798
10	0,1132157	20	0,003527143
12	0,1381242	22	0,0004976435



1 –

2.

( 2)  
 (III, IV, V, VI, VII),

(5), . . .

$$\bar{h} \approx t^2. \quad (2).$$



7 –

	$h_j$	$f_j$	$h_j f_j$	$h_j - \bar{h}$	$(h_j - \bar{h})^2$	$f_j (h_j - \bar{h})^2$
1	2	3	4	5	6	7
III	0	40	0	-0,7158273	0,5124088	20,49635
IV	1	39	39	0,2841727	0,08075409	3,14941
V	2	32	64	1,284173	1,649099	52,77118
VI	3	16	48	2,284173	5,217445	83,47912
VII	4	12	48	3,284173	10,78579	129,4295
		$\sum f_j = N$	$\sum h_j f_j$			$\sum f_j (h_j - \bar{h})^2$
		139	199			289,3255

$$\bar{h} = \frac{199}{139} = 0,7158273$$

$$\dagger^2 = \frac{289,3255}{139} = 1,040739.$$

$$P(k) \quad (4):$$

$$k=0$$

$$P(0; 0,89) = 0,410655753;$$

$$k=1$$

$$P(1; 0,89) = 0,36548362;$$

$$k=2$$

$$P(2; 0,89) = 0,162640211;$$

$$k=3$$

$$P(3; 0,89) = 0,048249929;$$

$$k=4$$

$$P(4; 0,89) = 0,010735609.$$

$$F_k :$$

$$F_k = P(k = j, \dots) \sum_{j=0}^n f_j. \quad (6)$$

,

III

$$(k=0)$$

$$F_0 = 0,410655753 \times 139 \approx 57$$

40.



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1. .
2. -
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3. .
4. ?