

$\sqrt{4}$
 $\left(\frac{1}{2023}\right)^{2023} < \left(\frac{1}{2022}\right)^{2022}$

1	2	3	4	5	6	7	8	9	10	sum
5	-	3	3	-	3	-	-	-	2	145

$\sqrt{3}$ 35
 $25 + 25 = 50$

$800 : 50 = 16$
 $16 \cdot 30 = 480$ 35

$\sqrt{4}$
 Пусть x - бер. номер, b - сум. мар, a и c - проза, y - б. зл. мар
 Тогда

$P(x) = \frac{4}{10} \cdot 0,8 = 0,32$
 $P(y) = \frac{6}{10} \cdot 0,9 = 0,54$
 $P(x \cup y) = P(x) + P(y) = 0,32 + 0,54 = 0,86$ 35

10. $V_1 = 2V, V = V_{AK} = V_K$

$AA_1 = \sqrt{R^2 + 4^2} = \sqrt{32} = 4\sqrt{2}$
 $R_K = 2r = 2\sqrt{2}, BD = 4\sqrt{2}, R = 8\sqrt{2}$

$OD = h = \sqrt{R^2} - 8 = \sqrt{8}$
 $V_{AK} = \frac{1}{3} \pi h (R^2 - R_1^2 + R R_1) = \frac{1}{3} \pi \cdot 2\sqrt{2} (18\sqrt{2} R^2 + (8\sqrt{2})^2 + 32) = 112 \pi \sqrt{2}$
 $V_K = \frac{1}{3} \pi R^2 h = \frac{1}{3} \pi (8\sqrt{2})^2 \cdot 2\sqrt{2} = 16 \pi \sqrt{2}$

$V = 112 \pi \sqrt{2} - 16 \pi \sqrt{2} = 96 \pi \sqrt{2}$
 $U = 2V = 2 \cdot 96 \pi \sqrt{2} = 192 \pi \sqrt{2}$ 25

6. $K = [n/p] + [n/p^2] + \dots +$

где $[x]$ - целая часть

где 2: $k = [2023/3] + [2023/9] + \dots = 1011 + 337 + 112 + 37 + 12 + 4 + 1 = 2004$

где 3: $k = [2023/3] + [2023/9] + \dots = 674 + 224 + 74 + 24 + 8 + 2 = 1006$

$\min(2004, 1006, 1) = 1$

ответ: $k = 6$ 35