

Китайская теорема об остатках

Найти решение системы сравнений.

Задача 13.1.

3

$$\begin{aligned}x &= 5 \pmod{7} \\ x &= 1 \pmod{3} \\ x &= 2 \pmod{4}\end{aligned}$$

Задача 13.2.

3

$$\begin{aligned}x &= 6 \pmod{7} \\ x &= 1 \pmod{5} \\ x &= 0 \pmod{6}\end{aligned}$$

Задача 13.3.

3

$$\begin{aligned}x &= 2 \pmod{3} \\ x &= 2 \pmod{5} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.4.

3

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 1 \pmod{3} \\ x &= 1 \pmod{2}\end{aligned}$$

Задача 13.5.

3

$$\begin{aligned}x &= 1 \pmod{3} \\ x &= 4 \pmod{5} \\ x &= 2 \pmod{4}\end{aligned}$$

Задача 13.6.

3

$$\begin{aligned}x &= 1 \pmod{5} \\ x &= 5 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.7.

3

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 2 \pmod{7} \\ x &= 3 \pmod{6}\end{aligned}$$

Задача 13.8.

3

$$\begin{aligned}x &= 1 \pmod{3} \\ x &= 1 \pmod{7} \\ x &= 1 \pmod{5}\end{aligned}$$

Задача 13.9.

3

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 3 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.10.

3

$$\begin{aligned}x &= 2 \pmod{3} \\ x &= 4 \pmod{5} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.11.

3

$$\begin{aligned}x &= 2 \pmod{3} \\ x &= 4 \pmod{7} \\ x &= 1 \pmod{4}\end{aligned}$$

Задача 13.12.

3

$$\begin{aligned}x &= 2 \pmod{5} \\ x &= 2 \pmod{3} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.13.

3

$$\begin{aligned}x &= 2 \pmod{5} \\ x &= 3 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.14.

3

$$\begin{aligned}x &= 4 \pmod{5} \\ x &= 2 \pmod{7} \\ x &= 3 \pmod{6}\end{aligned}$$

Задача 13.15.

3

$$\begin{aligned}x &= 1 \pmod{3} \\ x &= 4 \pmod{5} \\ x &= 2 \pmod{4}\end{aligned}$$

Задача 13.16.

3

$$\begin{aligned}x &= 2 \pmod{5} \\ x &= 2 \pmod{3} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.17.

3

$$\begin{aligned}x &= 1 \pmod{5} \\ x &= 6 \pmod{7} \\ x &= 5 \pmod{6}\end{aligned}$$

Задача 13.18.

3

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 6 \pmod{7} \\ x &= 2 \pmod{6}\end{aligned}$$

Задача 13.19.

3

$$\begin{aligned}x &= 2 \pmod{7} \\ x &= 8 \pmod{11} \\ x &= 3 \pmod{9}\end{aligned}$$

Задача 13.20.

3

$$\begin{aligned}x &= 1 \pmod{5} \\ x &= 5 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.21.

3

$$\begin{aligned}x &= 1 \pmod{5} \\ x &= 2 \pmod{3} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.22.

3

$$\begin{aligned}x &= 1 \pmod{3} \\ x &= 2 \pmod{7} \\ x &= 3 \pmod{5}\end{aligned}$$

Задача 13.23.

3

$$\begin{aligned}x &= 4 \pmod{5} \\ x &= 1 \pmod{7} \\ x &= 3 \pmod{6}\end{aligned}$$

Задача 13.24.

3

$$\begin{aligned}x &= 5 \pmod{7} \\ x &= 1 \pmod{3} \\ x &= 1 \pmod{5}\end{aligned}$$

Задача 13.25.

3

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 1 \pmod{7} \\ x &= 2 \pmod{6}\end{aligned}$$

Задача 13.26.

3

$$\begin{aligned}x &= 3 \pmod{7} \\ x &= 1 \pmod{5} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.27.

3

$$\begin{aligned}x &= 4 \pmod{5} \\ x &= 4 \pmod{7} \\ x &= 0 \pmod{6}\end{aligned}$$

Задача 13.28.

3

$$\begin{aligned}x &= 2 \pmod{3} \\ x &= 3 \pmod{5} \\ x &= 1 \pmod{4}\end{aligned}$$

Задача 13.29.

3

$$\begin{aligned}x &= 1 \pmod{3} \\ x &= 4 \pmod{5} \\ x &= 2 \pmod{4}\end{aligned}$$

Задача 13.30.

3

$$\begin{aligned}x &= 1 \pmod{7} \\ x &= 3 \pmod{5} \\ x &= 0 \pmod{6}\end{aligned}$$

Китайская теорема об остатках

№	x	z_i	M_i
1	82(mod 84)	1, 4, 6,	12, 28, 21,
2	6(mod 210)	3, 3, 6,	30, 42, 35,
3	2(mod 30)	2, 2, 2,	10, 6, 15,
4	13(mod 30)	3, 4, 1,	6, 10, 15,
5	34(mod 60)	2, 2, 6,	20, 12, 15,
6	26(mod 70)	4, 4, 6,	14, 10, 35,
7	93(mod 210)	4, 1, 3,	42, 30, 35,
8	1(mod 105)	2, 1, 6,	35, 15, 21,
9	38(mod 70)	2, 1, 6,	14, 10, 35,
10	14(mod 30)	2, 4, 6,	10, 6, 15,
11	53(mod 84)	2, 5, 1,	28, 12, 21,
12	2(mod 30)	2, 2, 6,	6, 10, 15,
13	52(mod 70)	3, 1, 2,	14, 10, 35,
14	9(mod 210)	2, 1, 3,	42, 30, 35,
15	34(mod 60)	2, 2, 2,	20, 12, 15,
16	2(mod 30)	2, 2, 2,	6, 10, 15,
17	41(mod 210)	3, 3, 1,	42, 30, 35,
18	188(mod 210)	4, 3, 4,	42, 30, 35,
19	30(mod 693)	2, 1, 6,	99, 63, 77,
20	26(mod 70)	4, 4, 2,	14, 10, 35,
21	26(mod 30)	1, 2, 6,	6, 10, 15,
22	58(mod 105)	2, 2, 3,	35, 15, 21,
23	99(mod 210)	2, 4, 3,	42, 30, 35,
24	61(mod 105)	5, 2, 1,	15, 35, 21,
25	8(mod 210)	4, 4, 4,	42, 30, 35,
26	66(mod 70)	1, 4, 2,	10, 14, 35,
27	144(mod 210)	2, 2, 6,	42, 30, 35,
28	53(mod 60)	1, 4, 3,	20, 12, 15,
29	34(mod 60)	2, 2, 6,	20, 12, 15,
30	78(mod 210)	4, 4, 6,	30, 42, 35,