

Китайская теорема об остатках

Найти решение системы сравнений.

Задача 13.1.

2

$$\begin{aligned}x &= 5 \pmod{7} \\ x &= 10 \pmod{11} \\ x &= 2 \pmod{9}\end{aligned}$$

Задача 13.2.

2

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

Задача 13.3.

2

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

Задача 13.4.

2

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

Задача 13.5.

2

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

Задача 13.6.

2

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

Задача 13.7.

2

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 4 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.8.

2

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

Задача 13.9.

2

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

Задача 13.10.

2

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

Задача 13.11.

2

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

Задача 13.12.

2

$$\begin{aligned}x &= 3 \pmod{5} \\ x &= 6 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.13.

2

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

Задача 13.14.

2

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

Задача 13.15.

2

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

Задача 13.16.

2

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

Задача 13.17.

2

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

Задача 13.18.

2

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

Задача 13.19.

2

$$\begin{aligned}x &= 4 \pmod{5} \\ x &= 3 \pmod{7} \\ x &= 0 \pmod{6}\end{aligned}$$

Задача 13.20.

2

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

Задача 13.21.

2

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

Задача 13.22.

2

$$\begin{aligned}x &= 1 \pmod{5} \\ x &= 6 \pmod{7} \\ x &= 0 \pmod{2}\end{aligned}$$

Задача 13.23.

2

$$\begin{aligned}x &= 5 \pmod{7} \\ x &= 10 \pmod{11} \\ x &= 6 \pmod{9}\end{aligned}$$

Задача 13.24.

2

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

Задача 13.25.

2

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

Задача 13.26.

2

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

Задача 13.27.

2

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

Задача 13.28.

2

$$\begin{aligned}x &= 4 \pmod{5} \\ x &= 1 \pmod{7} \\ x &= 2 \pmod{6}\end{aligned}$$

Задача 13.29.

2

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

Задача 13.30.

2

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

Китайская теорема об остатках

№	x	z_i	M_i
1	362(mod 693)	5, 4, 4,	99, 63, 77,
2	19(mod 70)	4, 1, 1,	10, 14, 35,
3	38(mod 70)	1, 2, 6,	10, 14, 35,
4	2(mod 30)	2, 2, 6,	10, 6, 15,
5	38(mod 60)	1, 4, 6,	20, 12, 15,
6	37(mod 84)	6, 4, 1,	12, 28, 21,
7	18(mod 70)	2, 6, 6,	14, 10, 35,
8	178(mod 210)	4, 5, 2,	42, 30, 35,
9	17(mod 70)	1, 3, 1,	10, 14, 35,
10	19(mod 70)	1, 4, 1,	14, 10, 35,
11	58(mod 70)	2, 3, 6,	14, 10, 35,
12	48(mod 70)	2, 2, 6,	14, 10, 35,
13	8(mod 105)	1, 4, 3,	15, 35, 21,
14	101(mod 105)	3, 1, 6,	15, 35, 21,
15	26(mod 105)	5, 4, 6,	15, 35, 21,
16	16(mod 30)	1, 4, 2,	6, 10, 15,
17	1(mod 105)	1, 2, 6,	15, 35, 21,
18	16(mod 30)	1, 1, 6,	6, 10, 15,
19	24(mod 210)	2, 5, 6,	42, 30, 35,
20	14(mod 30)	2, 4, 6,	10, 6, 15,
21	34(mod 60)	2, 2, 2,	20, 12, 15,
22	6(mod 70)	4, 2, 6,	14, 10, 35,
23	285(mod 693)	5, 4, 3,	99, 63, 77,
24	22(mod 30)	2, 4, 6,	6, 10, 15,
25	41(mod 105)	6, 1, 6,	15, 35, 21,
26	14(mod 30)	2, 4, 6,	10, 6, 15,
27	66(mod 70)	4, 1, 6,	14, 10, 35,
28	134(mod 210)	2, 4, 4,	42, 30, 35,
29	26(mod 70)	4, 4, 6,	10, 14, 35,
30	53(mod 60)	4, 1, 3,	12, 20, 15,