

DATE 2024

11
109
25

NO.

三校数 7=64
三校数 86

永中金定树

ex.5 calc mod 7, 8, 9, 11 餘数

1) 924867

$$1000 \equiv -1 \pmod{7} \Rightarrow 924867 \equiv -924 + 867 \equiv -210 + 20 \equiv 20 \equiv 6 \pmod{7}$$

$$1000 \equiv 0 \pmod{8} \Rightarrow 924867 \equiv 867 \equiv 67 \equiv 11 \equiv 3 \pmod{8}$$

$$1000 \equiv 1 \pmod{9} \Rightarrow 924867 \equiv 924 + 867 \equiv 6 + 3 \equiv 9 \equiv 0 \pmod{9}$$

$$1000 \equiv -1 \pmod{11} \Rightarrow 924867 \equiv -924 + 867 \equiv -44 + 20 \equiv 9 \equiv 9 \pmod{11}$$

2) 7693280145

$$1000 \equiv -1 \pmod{7} \Rightarrow 7693280145 \equiv -7 + 693 - 280 + 145 \equiv 63 + 5 \equiv 5 \pmod{7}$$

$$1000 \equiv 0 \pmod{8} \Rightarrow 7693280145 \equiv 145 \equiv 65 \equiv 25 \equiv 1 \pmod{8}$$

$$1000 \equiv 1 \pmod{9} \Rightarrow 7693280145 \equiv 7 + 693 + 280 + 145 \equiv -2 + 63 + 10 + 100 \equiv -2 + 1 + 1 \equiv 0 \pmod{9}$$

$$1000 \equiv -1 \pmod{11} \Rightarrow 7693280145 \equiv -7 + 693 - 280 + 145 \equiv 4 + 33 - 60 + 10 \equiv 4 - 5 - 20 \equiv -19$$

$$\equiv -10 \pmod{11}$$

$$\equiv 1 \pmod{11}$$