

§ 8.1 $N=35 = 5 \times 7$ (in our mod)

Step 1 $m=2$ $\gcd(35,2)=1 \checkmark$

Step 2 $2^2=4, 2^3=8, 2^4=16, 2^5=32, 2^6=64=29$
 $2^7=58=23, 2^8=46, 2^9=22, 2^{10}=44=9, 2^{11}=18$
 $2^{12}=36=1 \quad \therefore P=36$

Step 3 $P/2=18$

Step 4

Step 5

§ 8.2 $N=21, m=11$ $\binom{2}{1} < 2^1 < 2 \binom{2}{1}$
 $m=11, 11-11^2$ $\oplus \equiv 1 \pmod{N}$
 $14_3 > = (F \oplus [10] \oplus [9])$ $\overline{11} \equiv 1 \pmod{N}$
~~17 for 8.11 Probly~~

§ 8.3 $x = \frac{61}{45} = 1 + \frac{16}{45} = 1 + \frac{1}{\frac{45}{16}} = 1 + \frac{1}{4 + \frac{1}{4}}$
 $61 = 1 \cdot 45 + 16, 45 = 2 \cdot 16 + 13, 16 = 1 \cdot 13 + 3$

$13 = 3 \cdot 3 + 1, 3 = 3 \cdot 1$
 $\frac{61}{45} = 1 + \frac{1}{2 + \frac{1}{1 + \frac{1}{4 + \frac{1}{3}}}}$

Also $\frac{121}{13}$

§ 8.4 $y=37042, Q=2^{20}, \frac{1}{2Q} = 4.76837 \times 10^{-7}$
 $\frac{y}{Q} = [a_0 a_1 a_2 \dots a_m]$ $a_0 = \frac{P_0}{Q_0} \left| \frac{P_1}{Q_0} - \frac{y}{Q} \right| \leq \delta, \left| a_0 + \frac{1}{a_1 + \frac{1}{a_2}} \right|$