

$$\begin{aligned} 5q &\equiv -2 \pmod{49} \\ &\equiv 145 \pmod{49} \\ q &\equiv 29 \pmod{49} \checkmark : 1 \pmod{7} \end{aligned}$$

$$\begin{aligned} a &= 38 + 49 \times 29 \\ &= 1459 \end{aligned}$$

$$\equiv 87 \pmod{343} \checkmark$$

$$f(87) = 3 \times 87^2 + 2 \times 87 + 100$$

$$= 22981 = 67 \times 343 \equiv 0 \pmod{343} \checkmark$$

$\therefore$  Two solns are

$$x = 141, 87. \checkmark$$