e. $5 \oslash 3$

$5 \otimes 3^{-1}$

$5 \otimes 7$

$(5 \times 7) \bmod 20$

$(35) \bmod 20 = 15$

f. 4^{-1} does not exist, because 4 is not a part of the gcd(20, k) list. This means it is not usable in our definition of ~~[illegible]~~ reciprocal.

3. In $\mathbb{Z}_{20}$ solve the following equations for x (find all the solutions or state that none exist)

g. $(9 \otimes x) \oplus 4 = 1$

$9 \otimes x = 1 \ominus 4$

$9^{-1} \otimes 9 \otimes x = 17 \otimes 9^{-1}$

$9 \otimes 9 \otimes x = 17 \otimes 9$

$1 \otimes x = 13$

$x = 13$