

5. Construct addition and multiplication tables for arithmetic modulo 11. For example, $7 + 8 \pmod{11}$ is 4 and $7 \cdot 8 \pmod{11}$ is 1 so the entry in row 7, column 8 would be 4 for the addition table and 1 for the multiplication table.

Use your tables to solve each of the following congruences:

a. $3x + 2 \equiv 8 \pmod{11}$

b. $3x - 5 \equiv 2 \pmod{11}$

c. $2x^2 + x + 8 \equiv 0 \pmod{11}$