4.4.1b Solve the linear congruence, $5x \equiv 2 \pmod{26}$

4.4.4c Solve the following sets of simultaneous congruences,
$x \equiv 5 \pmod 6$,
$x \equiv 4 \pmod{11}$,
$x \equiv 3 \pmod{17}$

4.4.10 A band of 17 pirates stole a sack of gold coins. When they tried to divide the fortune into equal portions, 3 coins remained. In the ensuing brawl over who should get the extra coins, one pirate was killed. The wealth was redistributed, nut this time an equal division left 10 coins. Again an argument developed in which another pirate was killed. But now the total fortune was evenly distributed among the survivors. What was the least number of coins that could have been stolen?

4.4.13 If $x \equiv a \pmod n$, prove that either $x \equiv a \pmod{2n}$ or $x \equiv a + n \pmod{2n}$

4.4.20a Find the solutions of the following system of congruences,
$5x + 3y \equiv \pmod 7$
$3x + 2y \equiv 4 \pmod 7$