Harder Ratio Problems

(a) The ratio of white socks to black socks is 1 : 4 in a drawer. Four white socks are added to the drawer and the ratio of white socks to black socks becomes 5 : 12. Find the number of white socks and black socks there were initially.

(b) Lily and Mary have marbles in the ratio 5 : 6. Lily gets two more marbles and now the ratio is 7 : 8. How many marbles did each girl have initially?

(c) The ratio of the number of boys to girls at a party is 3 : 4 Six boys leave the party. The ratio of the number of boys to girls at the party is now 5 : 8 Work out the number of girls at the party.

(d) The ratio of pigeons to ducks in a park is 3 : 2. When 5 pigeons fly away, the ratio of pigeons to ducks becomes 5 : 4. How many ducks and pigeons were there originally?

(e) Bill and Chuck share some sweets in the ratio 7 : 3. Bill gives 3 sweets to Chuck and now the ratio is 5 : 3. How many sweets did each have initially?

(f) There are two bags containing counters, bag A and bag B. The ratio of counters in bag A to bag B is 3 : 4. Twelve counters are taken from bag B and added to bag A and the number of counters in each bag is now the same. How many counters were there originally in each bag?