Problem of the Week Problem E A Heavy Problem

Four boxes: one blue, one green, one pink, and one yellow, each have a different mass. The mass of each box, in grams, is a positive integer. Inkeri does not know the individual masses of the boxes, but she knows the combined mass of the pink, blue, and green boxes is 13 grams. She also knows the combined mass of the blue, green, and yellow boxes is 17 grams, and the combined mass of the pink, green, and yellow boxes is 19 grams. Determine all possibilities for the individual masses of the boxes.

