

H-Problem 3 [Sri's Dilemma]

Sri went to a shop to measure an object she was carrying. The shopkeeper while trying to weigh the object, accidentally dropped his forty kilogram measuring weight from his hand. This 40kg weight broke into four pieces as the result of the fall. When the pieces are weighed one by one, it was found that the weight of each piece is a whole number of kilos and that these four pieces can be used to weigh every integral weight between 1 and 40 kilos. What were the weights of the pieces? The shopkeeper is using common balance for measuring with left and right arms.