

Two brands of chocolates are available in packs of 24 and 15 respectively. If I need an equal number of chocolates of both kinds, what is the least number of boxes of each kind I would need to buy?

Solution:

Since the least number of boxes of each kind are required, the number of chocolates packed in each box should be maximum i.e. the HCF of 24 and 15.

By Euclid's Division Algorithm

$$24 = 15 \times 1 + 9$$

$$15 = 9 \times 1 + 6$$

$$9 = 6 \times 1 + 3$$

$$6 = 3 \times 2 + 0$$

$$\text{HCF} = 3$$

$$\text{Number of boxes of first kind} = \frac{24}{3} = 8$$

$$\text{Number of boxes of second kind} = \frac{15}{3} = 5$$