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2) Let say the no of marbel John has = x

No of marble Jivanti have = 45-x

After loosing 5 marbels each

Number of marbels John have = x-5

no of marbles of Jivanti have = 45 - x - 5
= 40 - x

Given that the product is = 124

$(x-5)(40-x) = 124$

$x^2 - 45x + 324 = 0$

$x^2 - 36x - 9x + 324 = 0$

$x(x-36) - 9(x-36) = 0$

$x = 36$ or $x = 9$

John's marbles = 36

Jivanti's marbles = 45 - 36 = 9

If John's marbles = 9

Then Jivanti's marbles = 45 - 9 = 36

(2) Let us say # number of each toy = ₹(55-x)

Given, total cost = ₹750

$x(55-x) = 750$

$\Rightarrow x^2 - 55x + 750 = 0$

$\Rightarrow x^2 - 25x - 30x + 750 = 0$

$\Rightarrow x(x-25) - 30(x-25) = 0$

$\Rightarrow (x-25)(x-30) = 0$

either $x - 25 = 0$ or $x - 30 = 0$

$\Rightarrow x = 25$ or $x = 30$

Hera, the number of toys producing day, will be either 25 or 30.

3

Let the first number be x and second no. be $= 27 - x$