

Quadratic equations

harshitaa@sripraka(paidisettyharshitshschools.com)

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10th Maths - Chapter 4

This is problem 2.2 from Exercise 4.2

1. Type your question

A cottage industry produces a certain number of toys in a day. The cost of production of each toy was found to be 55 minus the number of toys produced in a day. On a particular day, the total cost of production was Rs 750. We would like to find out the number of toys produced on that day.

Solution:

let the number of toys produced on that be x therefore, the cost of production (in rupees) of each toy that day = $55 - x$ so, the total cost of production that day = $(x \times (55 - x) = 750)$

$$(55 \times x - x^2)$$

$$(-x^2 + 55x - 750 = 0)$$

hence the equation is $(x^2 - 55x + 750 = 0)$