QUADRATIC EQUATIONS

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10^{th} Maths - Chapter 4

This is Problem-2.1 from Exercise 4.1

1. Represent the following situations in the form of quadratic equations :
(i) The area of a rectangular plot is 528 m^2. The length of the plot (in metres) is one more than twice its breadth. We need to find the length and breadth of the plot
Solution: :
Required quadratic equation is : $2x^2 + x - 528 = 0$
$2x^2 + 33x - 32xx - 528 = 0$
$x(2x + 33) - 16(2x + 33) = 0$
$(2x + 33)(x - 16) = 0$
$x - 16 = 0$ or $2x + 33 = 0$
$x = 16$ or $x = 2 - 33$
Hence, Length of plot is $2x + 1 = 216 + 1 = 33m$and breadth is 16 m