

Grade 9 Mathematics Worksheet

Area

Questions:

1. A rectangular greeting card has an area of $x^2 - 10x - 200$ square centimetres.
 - a) If the length of the card is $x + 10$ cm, what will be the breadth of the card in terms of x ?
 - b) None of the sides of the rectangular card may be smaller than 5cm. What does this tell us about the values of x ?

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Solution

1. a) $Area = L \times B$
 $\therefore x^2 - 10x - 200 = (x + 10) \times B$
 $\therefore B = \frac{x^2 - 10x - 200}{x + 10} = \frac{(x + 10)(x - 20)}{x + 10} = x - 20$
- b) $x + 10 > 5 \rightarrow x > -5$ and $x - 20 > 5 \rightarrow x > 25$
 $\therefore x > 25$

The second part of the question is very important to discuss and assess. Here the learners will develop a habit to check their algebraic solutions when working in a non-algebraic context.