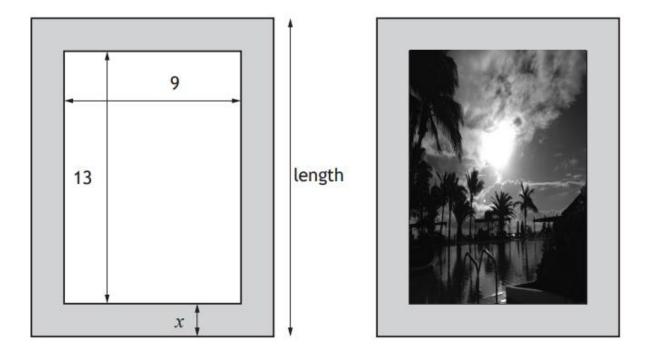
## National 5 Maths SQA 2015 Paper 2 Question 14



A rectangular picture measuring 9 centimetres by 13 centimetres is placed on a rectangular piece of card.

The area of the card is 270 square centimetres.

There is a border x centimetres wide on all sides of the picture.



(a)	(i)	Write down an expression for the length of the card in terms of $x$ .	1
	<b>(</b> ii)	Hence show that $4x^2 + 44x - 153 = 0$ .	2
<b>(</b> b <b>)</b>	) Calculate <i>x</i> , the width of the border.		
	Give	your answer correct to one decimal place.	4

Answers:

(a) (i) 2x + 13

(ii) Use "area = length × width" to obtain the required equation.

(b) 2.8 cm

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