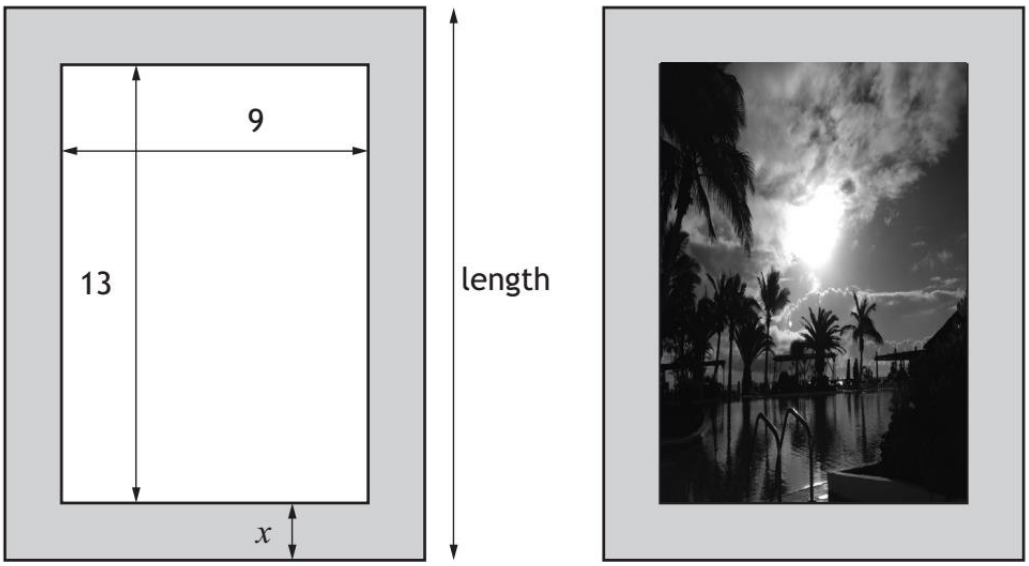
Quadratic formula & Discriminant

YEAR	PAPER	QUESTION
2016	1	Determine the nature of the roots of the function $f(x) = 7x^2 + 5x - 1$. **2**
2017	2	Solve the equation $2x^2 + 5x - 4 = 0$. Give your answers correct to one decimal place. **3**
2015	2	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** (ii) Hence show that $4x^2 + 44x - 153 = 0$. **2** (b) Calculate x, the width of the border. Give your answer correct to one decimal place. **4**
2018	1	Determine the nature of the roots of the function $f(x) = 2x^2 + 4x + 5$. **2**

2022	2	Solve the equation $4x^2 + 2x - 7 = 0$. Give your answers correct to 2 significant figures.	4