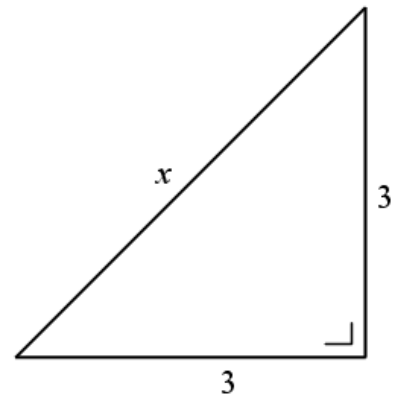
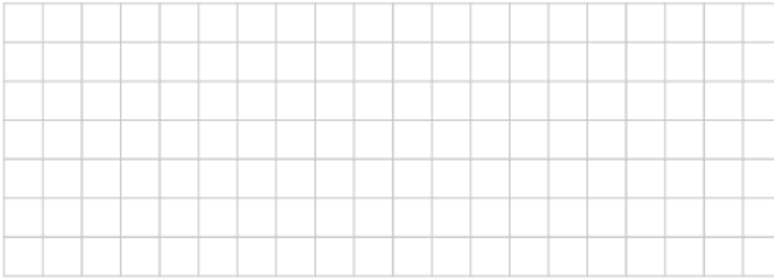


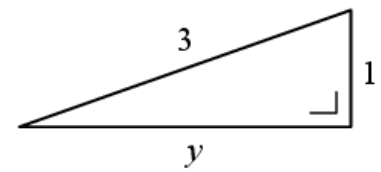
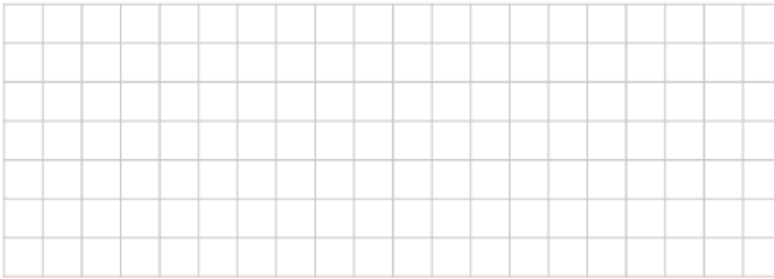


## Question 2

- (i) Use the diagram on the right to calculate the value of  $x$ .  
Give your answer in surd form.

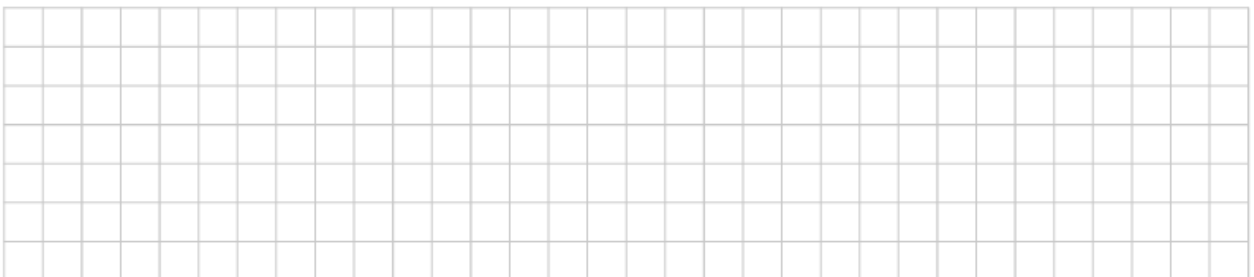
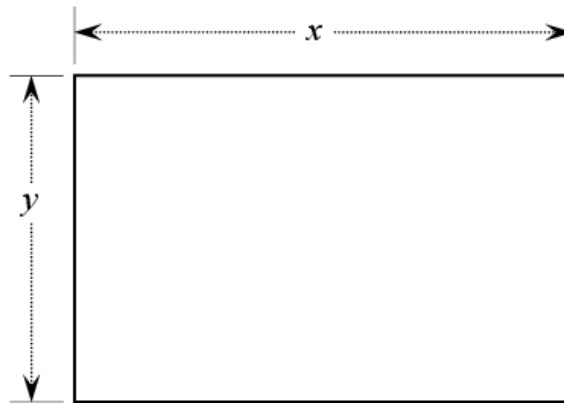


- (ii) Use the diagram below to calculate the value of  $y$ . Give your answer in surd form.



- (iii) A rectangle with sides of length  $x$  and  $y$  is drawn using the values of  $x$  and  $y$  from parts (i) and (ii), as shown below.

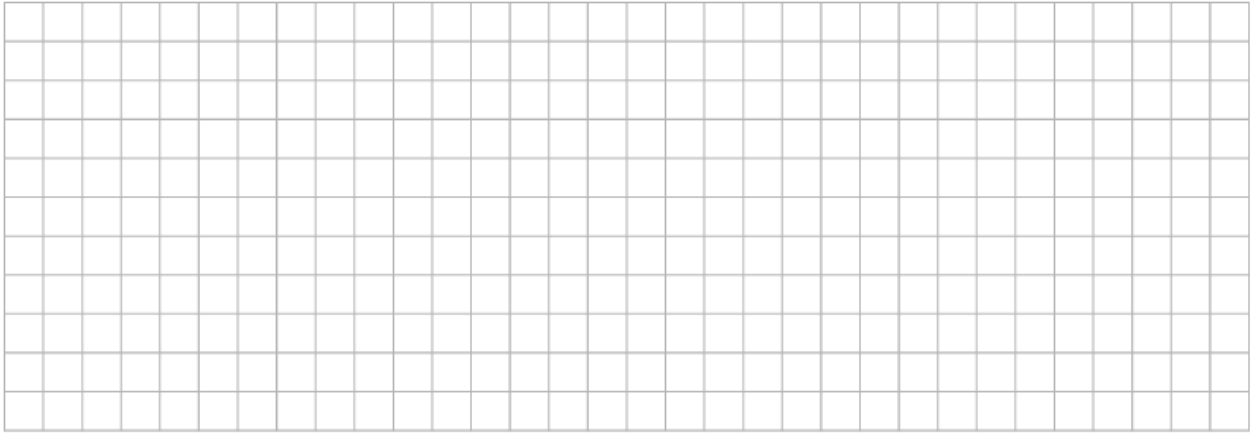
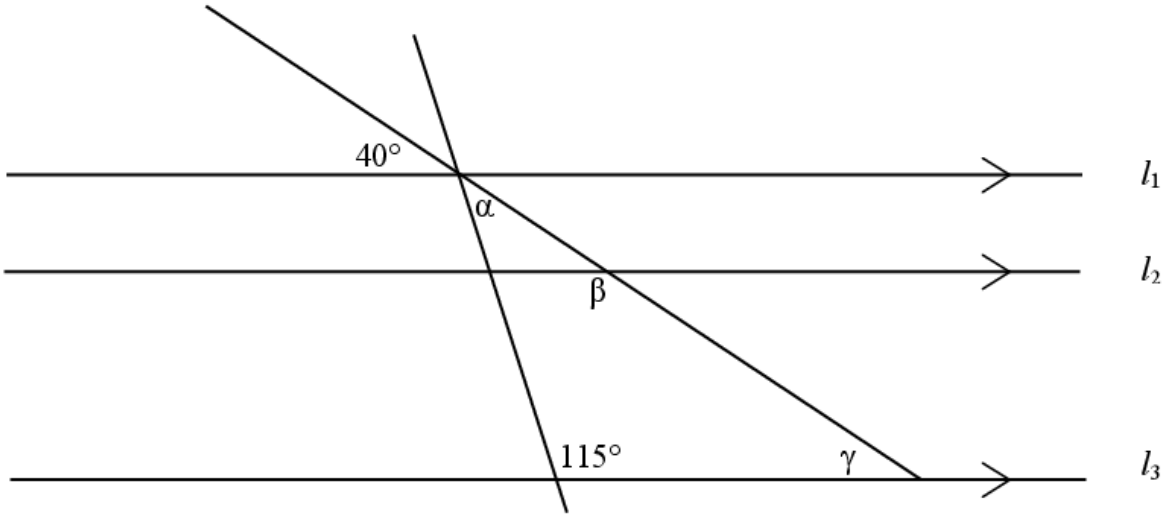
Write the **perimeter** of this rectangle in the form  $a\sqrt{2}$ , where  $a \in \mathbb{N}$ .





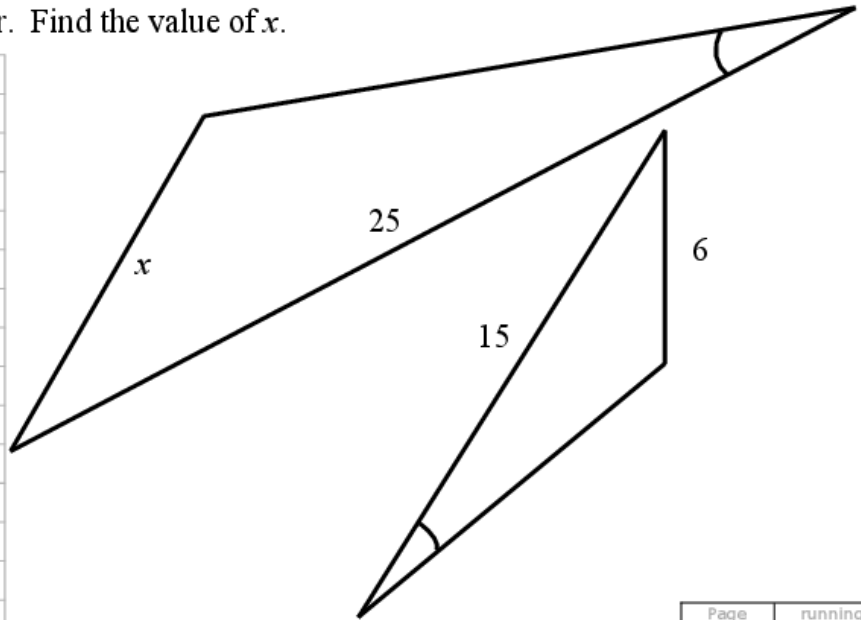
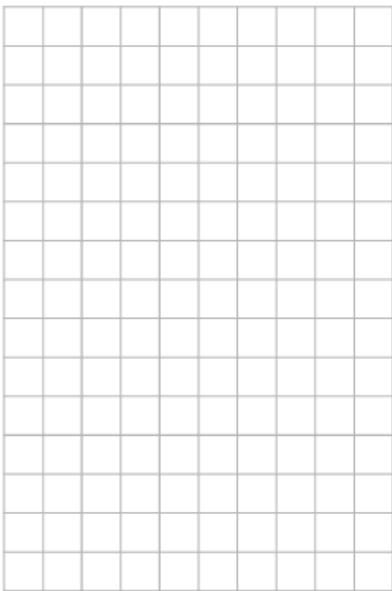
### Question 4

If  $l_1$ ,  $l_2$  and  $l_3$  are parallel lines, find the measure of the angles  $\alpha$ ,  $\beta$  and  $\gamma$ .



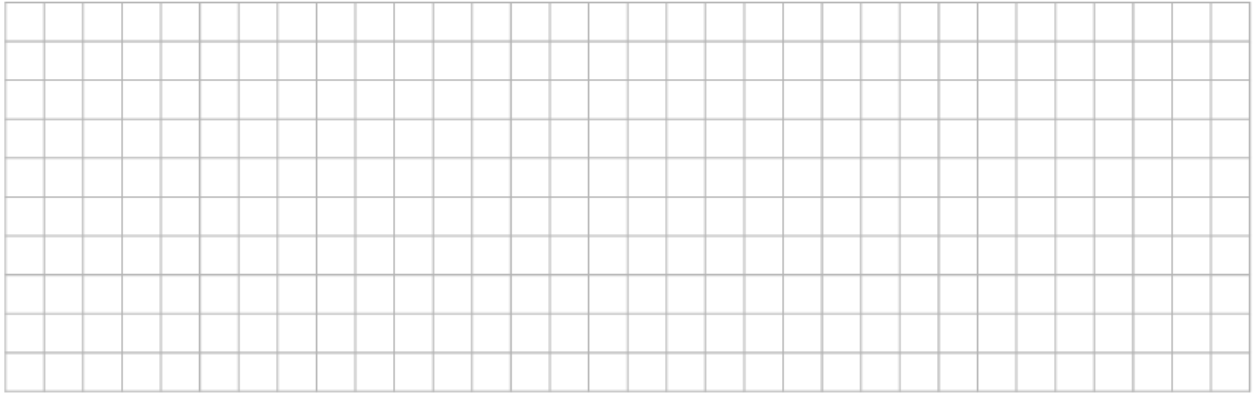
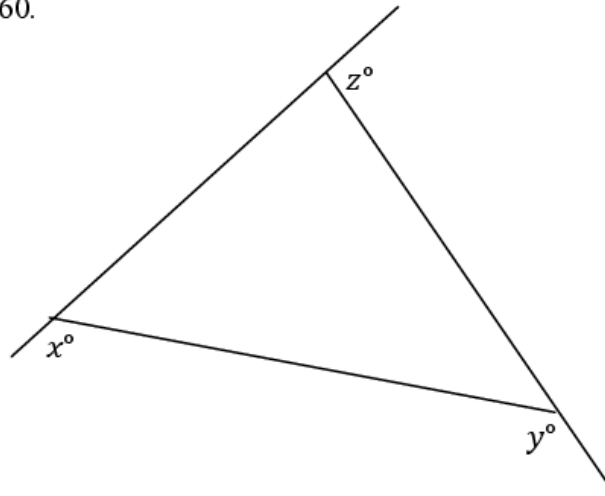
### Question 5

The two triangles shown are similar. Find the value of  $x$ .

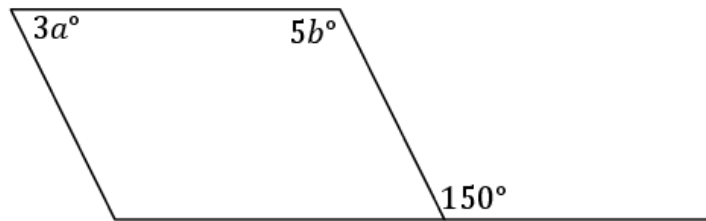


# Question 6

(a) Prove that  $x + y + z = 360$ .



(b) The diagram below shows a parallelogram and one exterior angle. Find the value of  $a$  and the value of  $b$ .



### Question 7

A triangle has a base length of  $2x$  cm and a perpendicular height of  $(x + 3)$  cm. The area of the triangle is  $10 \text{ cm}^2$ . Find the distance  $x$ .

