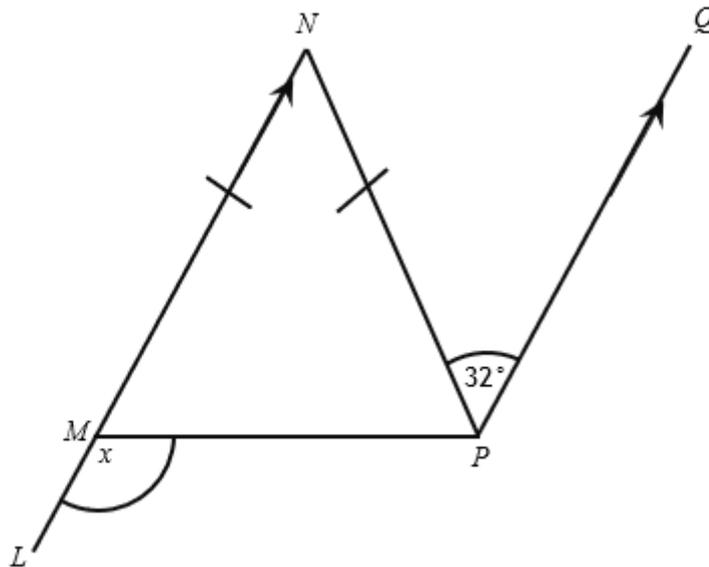


## FA Problem Solving Questions – Set 6a

51a  $LMN$  is a straight line and is parallel to  $PQ$

$$MN = NP$$

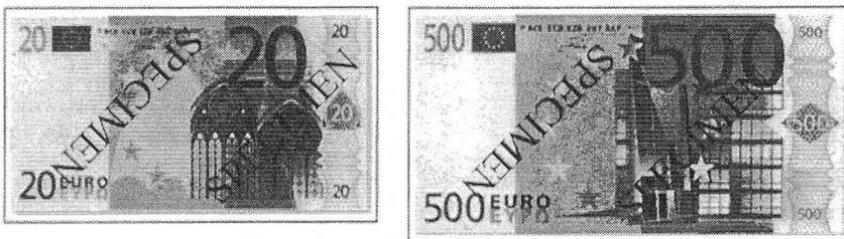


Not drawn accurately

Work out the value of  $x$   
Give reasons for your answer.

[3 marks]

52a.



Pictures **NOT**  
accurately drawn

A 20 Euro note is a rectangle 133 mm long and 72 mm wide.

A 500 Euro Note is a rectangle 165 mm long and 82 mm wide.

Show that the two rectangles are not mathematically similar.

(3 marks)

53a. Alison ran 800m in 2 min 48 sec.

- What was her average speed in metres/sec?
- If she ran at the same speed for 10 mins how far would she run?
- Is this a realistic estimate for how far she could run in 10mins?

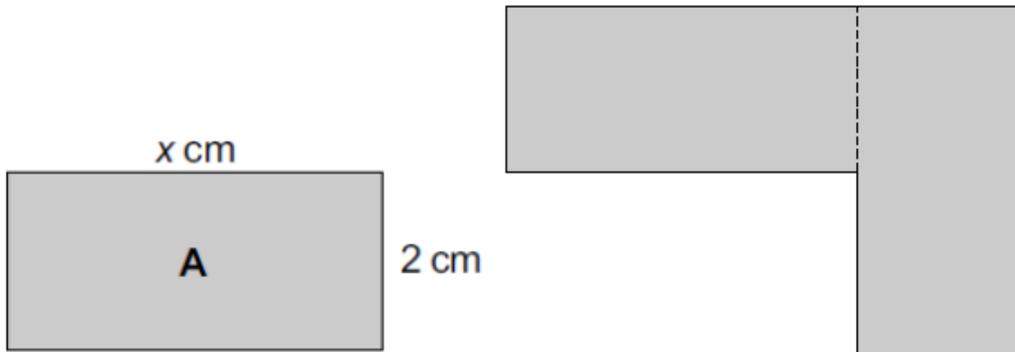
(4 marks)



- 58a. All tickets for a concert are the same price.  
Amy and Dan pay £63 altogether for some tickets.  
Amy pays £24.50 for 7 tickets.  
How many tickets does Dan buy?

(4 marks)

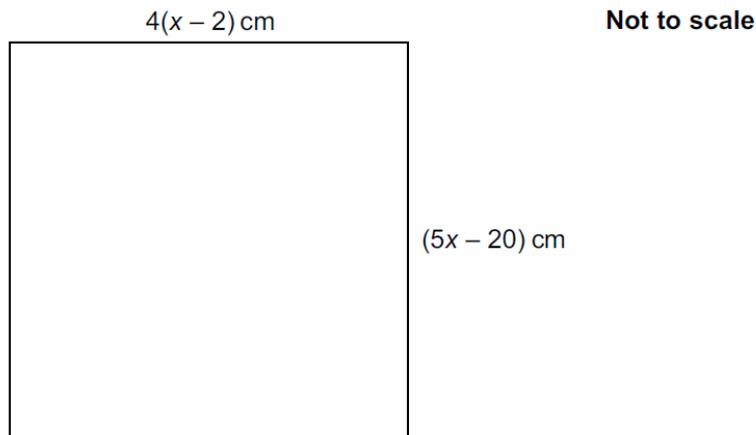
- 59a. Shape A is a rectangle of length  $x$  cm and width 2 cm.



Work out an expression for the perimeter of this shape.  
Give your answer in its simplest form.

(3 marks)

- 60a.



Work out the area of this square.

(3 marks)