

Surname	
Other Names	
Candidate's Signature	

## GCSE 9 - 1 Questions

### Parallel Line Angles

**Calculator Allowed**

#### INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

Write your answers in the spaces provided in this question paper.

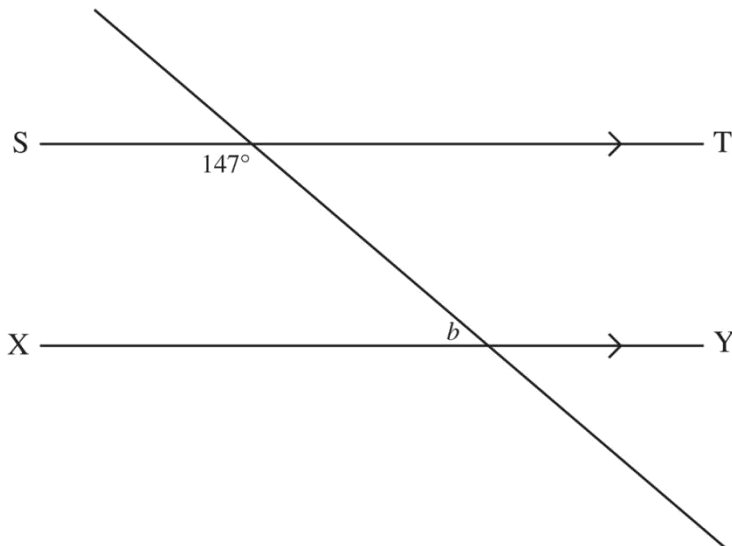
Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You should have a ruler, compass and protractor where required.

**Total Marks :**

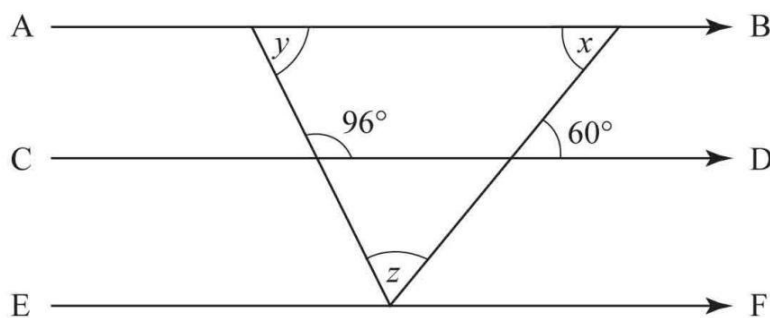
1)

Diagram not  
drawn accurately

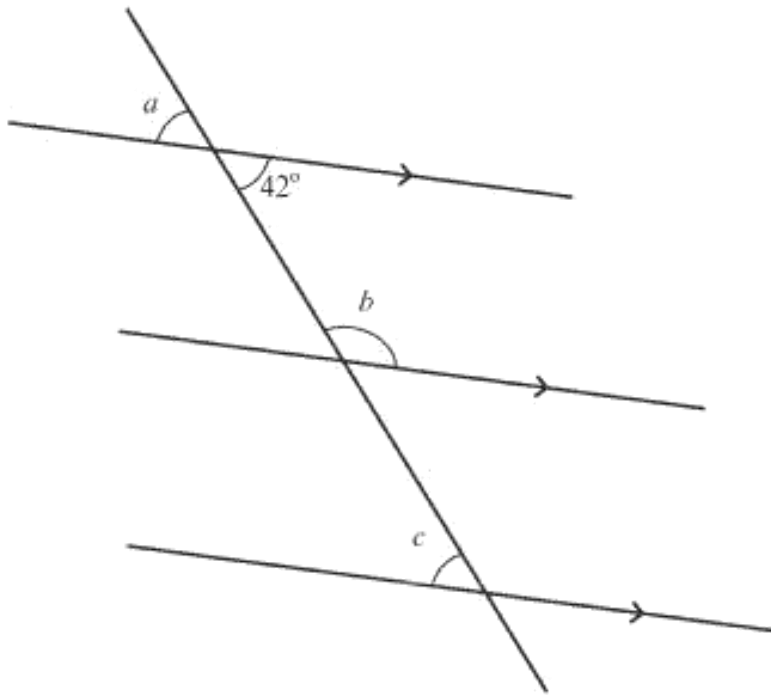
ST and XY are parallel lines.  
Calculate the size of angle  $b$ .

Answer  $b =$  \_\_\_\_\_  $^{\circ}$  [1]

2) Lines AB, CD and EF are parallel.

Angles of  $96^{\circ}$  and  $60^{\circ}$  are marked in the diagram as shown.Calculate the size of the angles marked  $x$ ,  $y$  and  $z$ .diagram not  
drawn accuratelyAnswer Angle  $x =$  \_\_\_\_\_  $^{\circ}$  [1]Angle  $y =$  \_\_\_\_\_  $^{\circ}$  [1]Angle  $z =$  \_\_\_\_\_  $^{\circ}$  [1]

3)



*Diagram not drawn to scale*

Find the size of each of the angles  $a$ ,  $b$  and  $c$ .

.....  
 .....  
 .....

$a = \dots\dots\dots^\circ$      $b = \dots\dots\dots^\circ$      $c = \dots\dots\dots^\circ$

[3]

4)

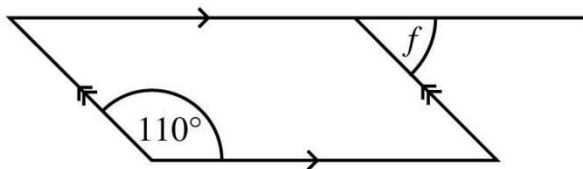


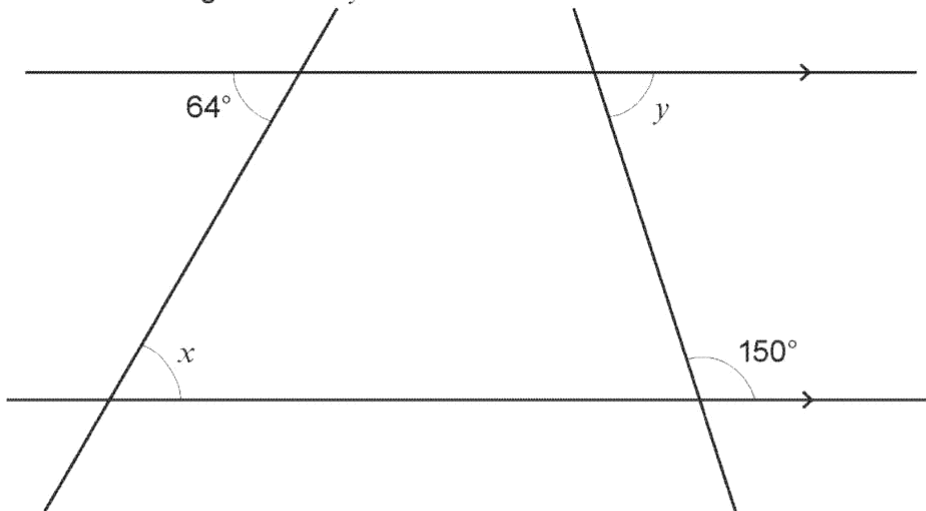
Diagram not drawn accurately

Calculate the angle  $f$

Answer  $\dots\dots\dots^\circ$  [2]

5) Find the size of angles  $x$  and  $y$ .

[2]

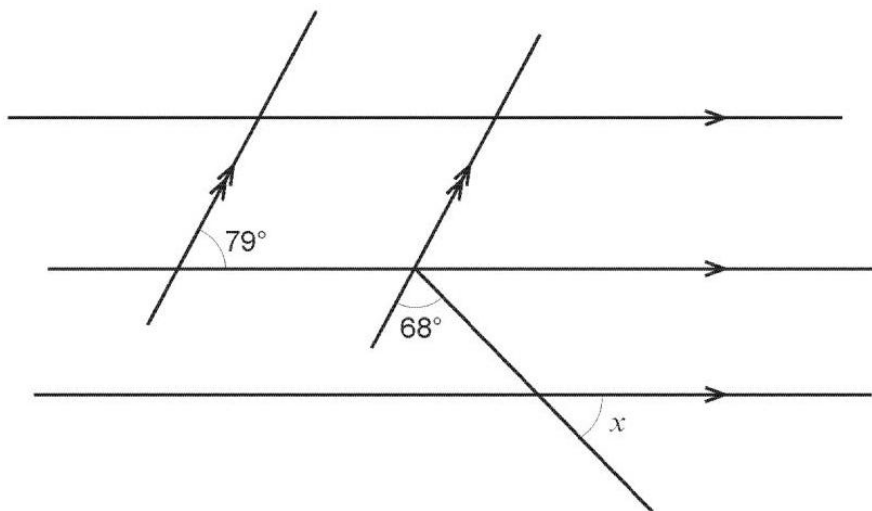


*Diagram not drawn to scale*

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$x = \dots\dots\dots^\circ$        $y = \dots\dots\dots^\circ$

6)



*Diagram not drawn to scale*

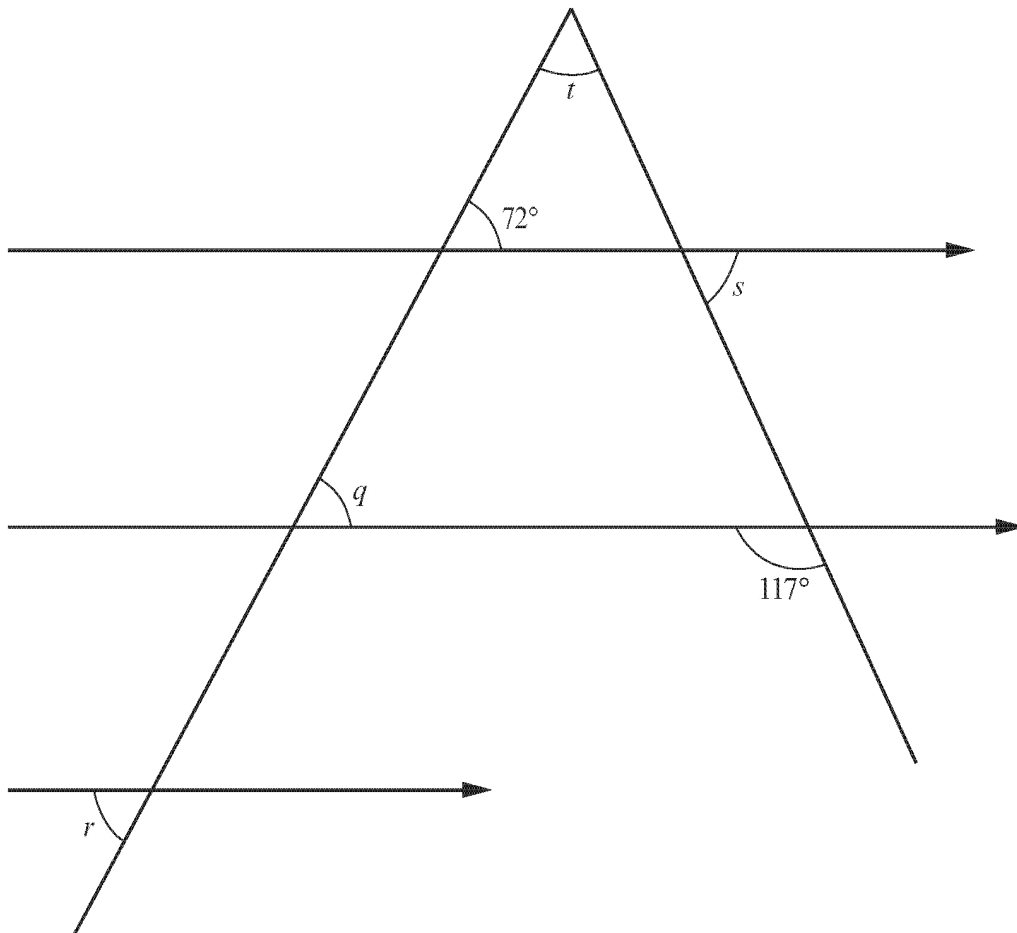
Calculate the size of the angle  $x$ .  
 You must show your working below or on the diagram.

[3]

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$x = \dots\dots\dots^\circ$

7)  
Find the size of the angles  $q$ ,  $r$ ,  $s$  and  $t$ .



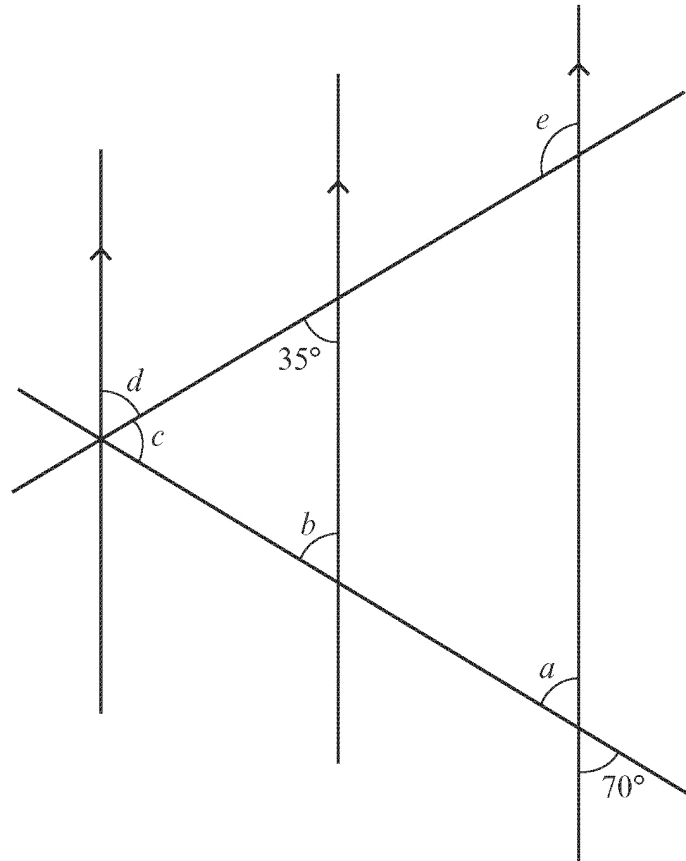
*Diagram not drawn to scale*

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$q = \dots\dots\dots^\circ$      $r = \dots\dots\dots^\circ$      $s = \dots\dots\dots^\circ$      $t = \dots\dots\dots^\circ$

[4]

8)



*Diagram not drawn to scale*

Find the size of the angles marked  $a$ ,  $b$ ,  $c$ ,  $d$  and  $e$ .

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.....

.....

$a = \dots\dots\dots^\circ$

$b = \dots\dots\dots^\circ$

$c = \dots\dots\dots^\circ$

$d = \dots\dots\dots^\circ$

$e = \dots\dots\dots^\circ$

[5]

9)

In the following diagram,  $AB$  and  $CD$  are parallel, and  $EF = EG$ .

$CFE$  is a straight line.

$\widehat{FCG} = 32^\circ$  and  $\widehat{BEG} = 110^\circ$ .

Find the size of  $\widehat{EFG}$ .

[4]

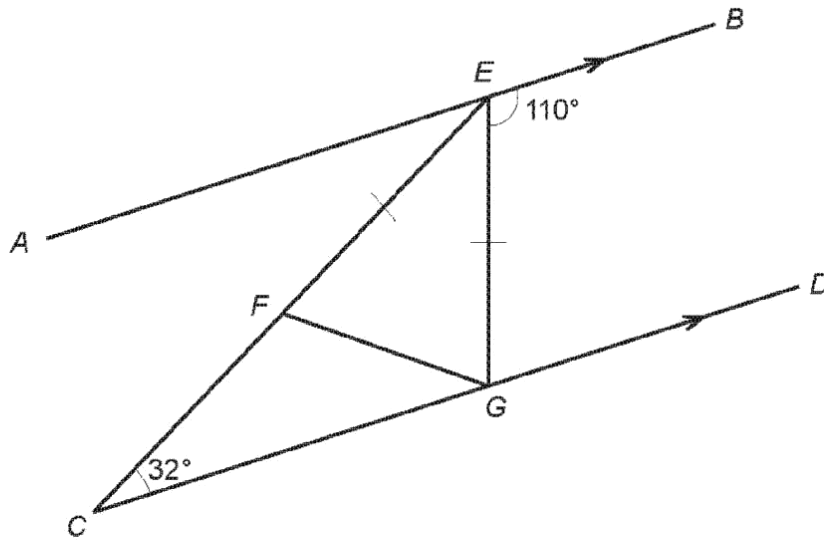


Diagram not drawn to scale

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10)

In the following diagram, lines  $DB$  and  $EA$  are parallel and  $CDF$  is an isosceles triangle. Find the size of angle  $y$ .

[3]

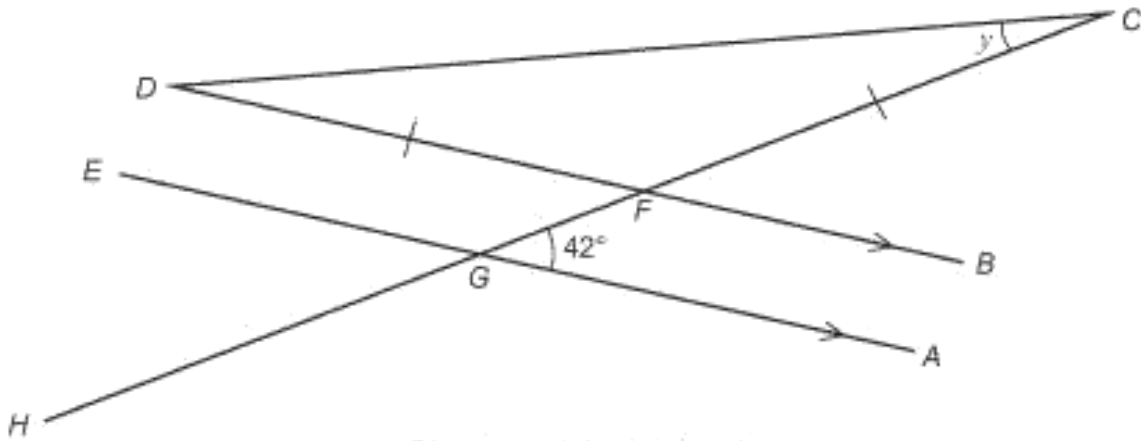


Diagram not drawn to scale

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$y = \dots\dots\dots^\circ$



11) (a)

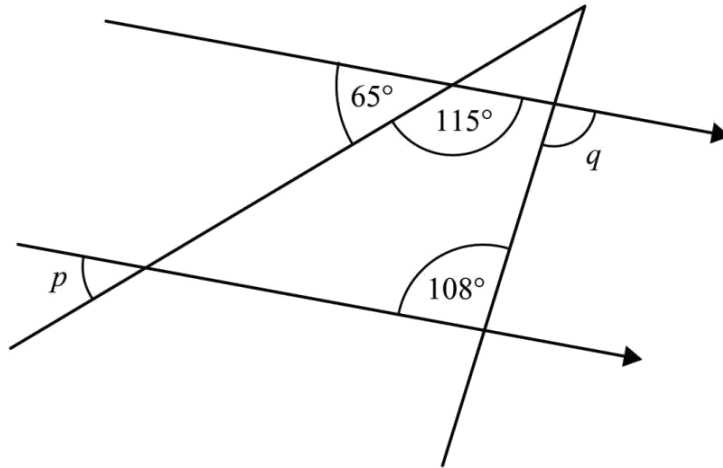


Diagram not drawn accurately

Calculate

(i) angle  $p$

Answer \_\_\_\_\_° [1]

(ii) angle  $q$

Answer \_\_\_\_\_° [1]

(b)

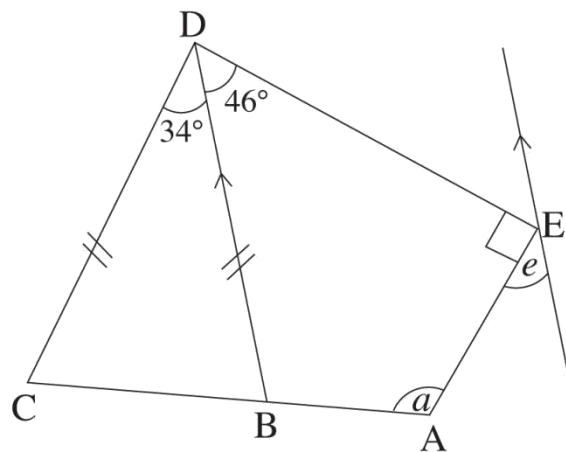


Diagram not drawn accurately

The line through E is parallel to BD.  
Calculate the size of the angle  $e$ .

Answer  $e =$  \_\_\_\_\_° [2]

12)

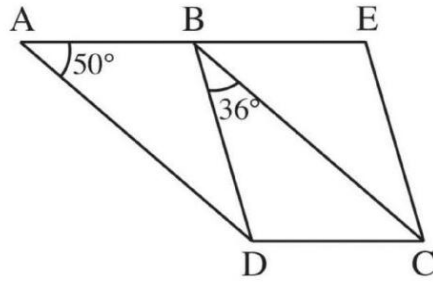


Diagram not  
drawn accurately

ABCD and BECD are parallelograms.  
Find, giving reasons for your answers, the size of

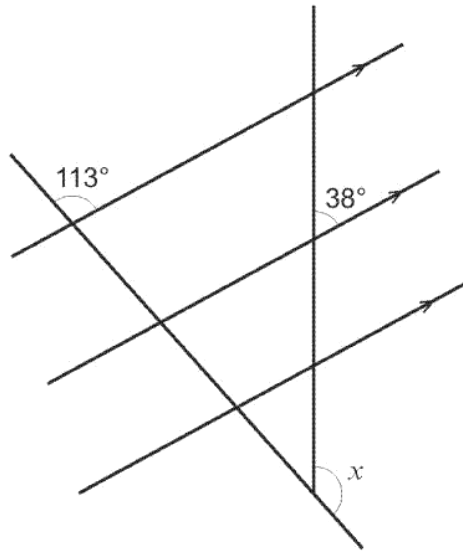
(a) the angle EBC

Answer \_\_\_\_\_° because \_\_\_\_\_ [1]

(b) the angle BEC

Answer \_\_\_\_\_° because \_\_\_\_\_  
\_\_\_\_\_ [3]

13)



*Diagram not drawn to scale*

Calculate the size of angle  $x$ .

[3]

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$x = \text{.....}^\circ$

14)

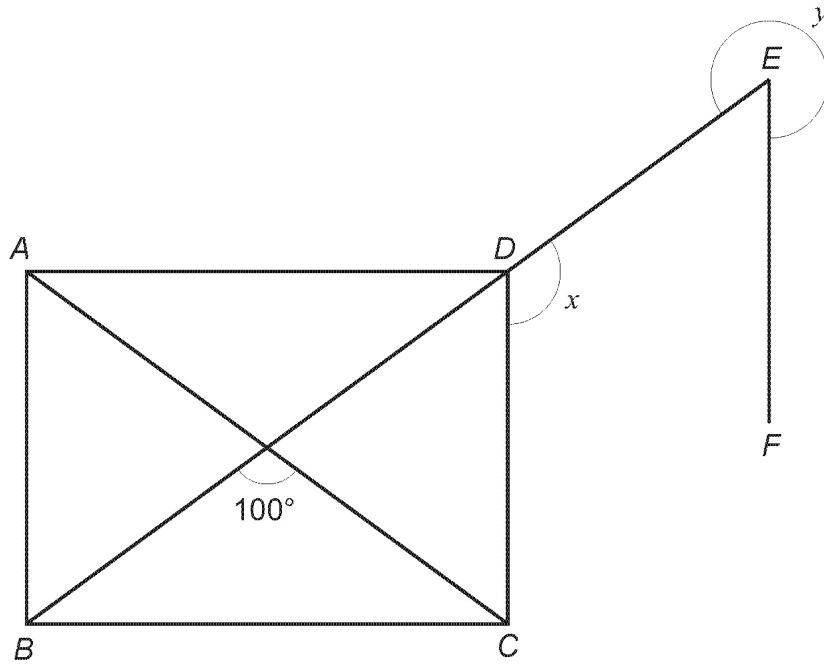


Diagram not drawn to scale

$ABCD$  is a rectangle.  
 $CD$  is parallel to  $FE$ .

Calculate the size of angles  $x$  and  $y$ .  
 It may help to show your working on the diagram.

[4]

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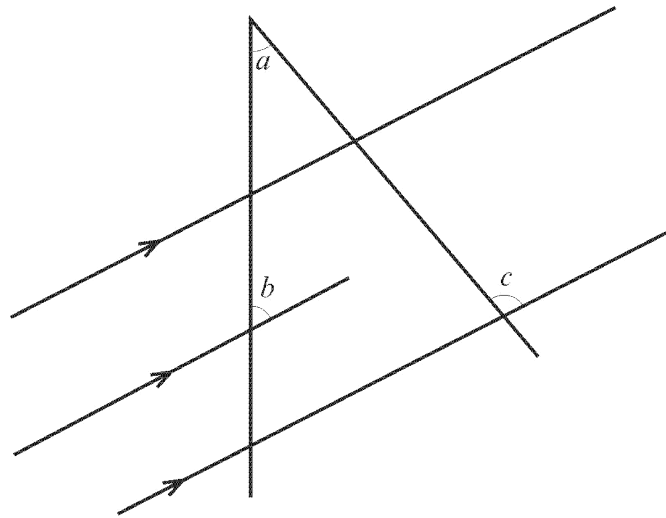
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$$x = \text{.....}^\circ \quad y = \text{.....}^\circ$$

15)

In the diagram, angles  $a$ ,  $b$  and  $c$  are measured in degrees.



*Diagram not drawn to scale*

Find the size of angle  $c$  in terms of  $a$  and  $b$ .

You must show all your working, which may be indicated on the diagram.

[3]

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