

Angles in Parallel Lines

Mark Scheme

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Angles in Parallel Lines
Grade Level	Grade 4
Booklet	Mark Scheme

Time Allowed: 33 minutes

Score: /27

Percentage: /100

Grade Boundaries:

1.

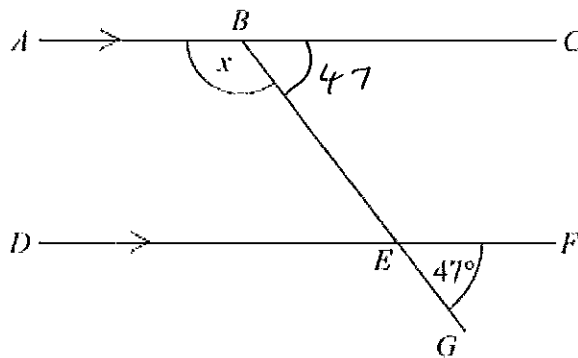


Diagram NOT
accurately drawn

ABC and DEF are parallel lines.

BEG is a straight line.

Angle $GEF = 47^\circ$.

Work out the size of the angle marked x .

Give reasons for your answer.

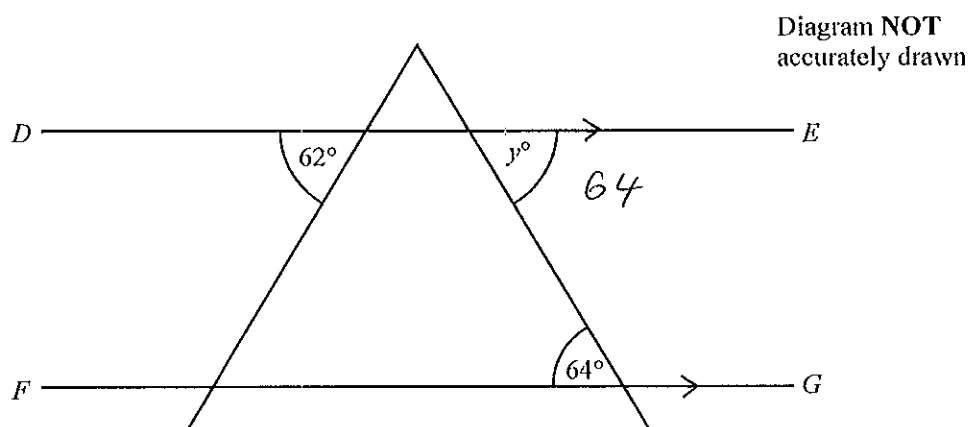
$\angle BEF = 47^\circ$ Corresponding angles are equal

$x = 133^\circ$ Angles on a straight line
add up to 180°

.....133.....°

(3 marks)

2.



DE is parallel to FG .

- (i) Find the size of the angle marked y° .

.....64.....°

(1)

- (ii) Give a reason for your answer.

.....alternate angles are equal.....

.....

(2)

(3 marks)

3.

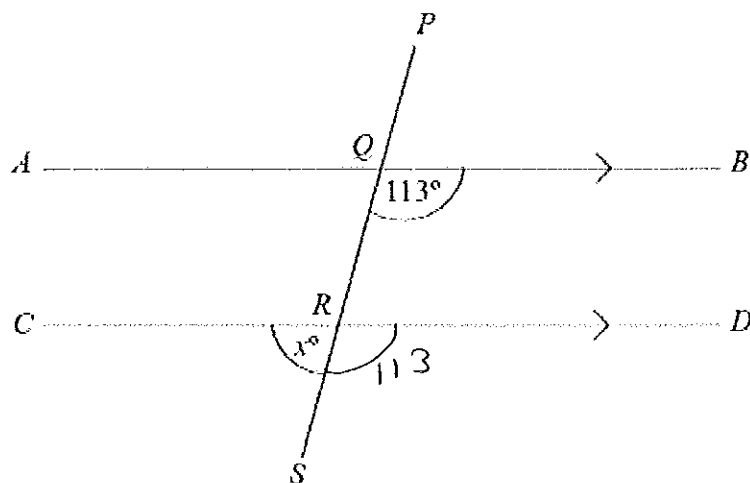


Diagram **NOT**
accurately drawn

AQB , CRD and $PQRS$ are straight lines.

AB is parallel to CD .

Angle $BQR = 113^\circ$.

(a) Work out the value of x .

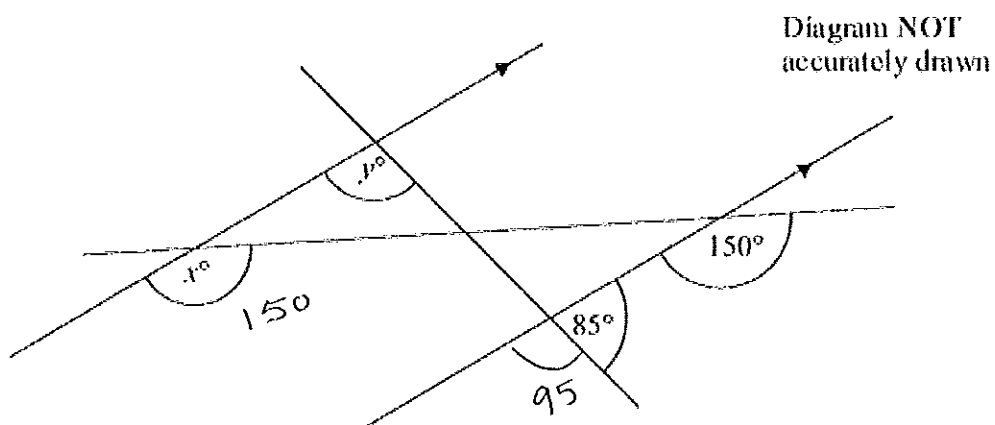
$$x = \dots\dots 67 \dots\dots$$

(b) Give reasons for your answer.

Corresponding angles are equal
Angles on a straight line add up to 180°

(4 marks)

4.



- (a) i) Find the value of x .

.....150.....
(1)

- ii) Give reasons for your answer.

Corresponding angles are equal

.....
(1)

- (b) i) Find the value of y .

.....95°.....
(2)

- ii) Give reasons for your answer.

angles on a straight line add up to 180°
corresponding angles are equal

.....
(2)

(6 marks)

*5.

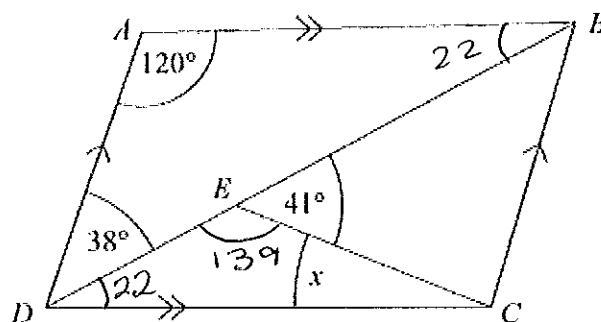


Diagram NOT
accurately drawn

$ABCD$ is a parallelogram.

Angle $ADB = 38^\circ$.

Angle $BEC = 41^\circ$.

Angle $DAB = 120^\circ$.

Calculate the size of angle x .

You must give reasons for your answer.

$$\hat{ABD} = 22^\circ \quad (\text{Angles in a triangle add up to } 180^\circ)$$

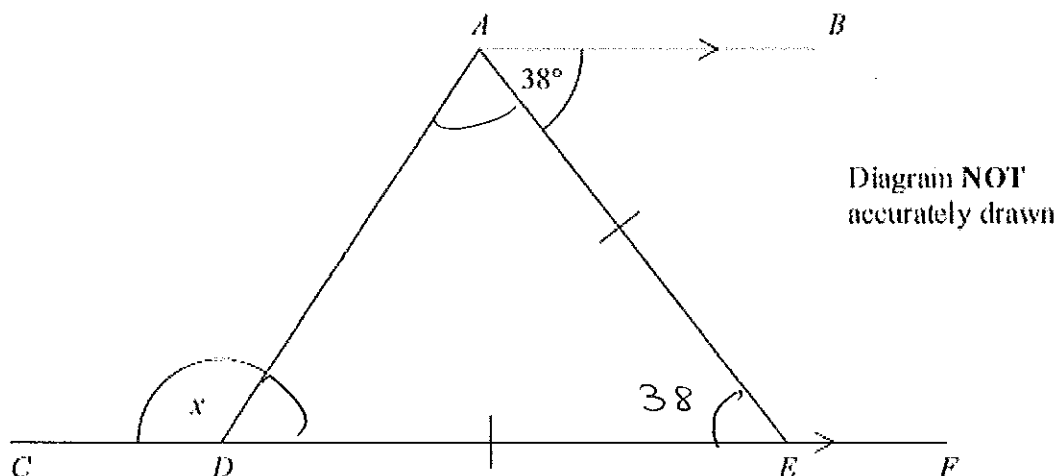
$$\hat{BDC} = 22^\circ \quad (\text{Alternate angles are equal})$$

$$\hat{CED} = 139^\circ \quad (\text{Angles on a straight line add up to } 180^\circ)$$

$$x = \underline{\underline{19^\circ}} \quad (\text{Angles in a triangle add up to } 180^\circ)$$

(4 marks)

*6.



$CDEF$ is a straight line.

AB is parallel to CF .

$DE = AE$.

Work out the size of the angle marked x .

You must give reasons for your answer.

$$\hat{AED} = 38^\circ \text{ Alternate angles are equal}$$

$$\hat{ADE} \text{ and } \hat{DAE} = 71^\circ \text{ (Angles at base of isosceles are equal)}$$

$$\underline{\underline{x = 109^\circ}} \text{ (Angles on a straight line add up to } 180^\circ \text{)}$$

(4 marks)

*7.

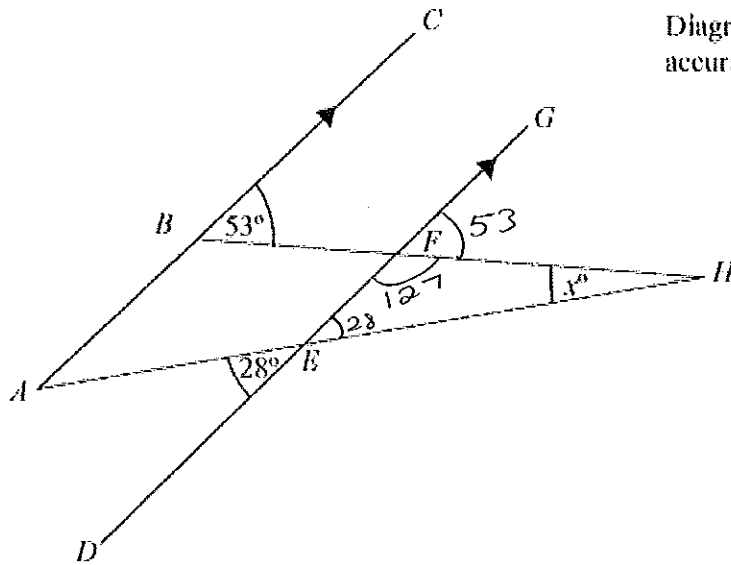


Diagram NOT
accurately drawn

ABC and $DEFG$ are parallel.
 AEH and BFH are straight lines.
 Work out the size of the angle marked x° .

$$\hat{GEH} = 28^\circ \quad \text{opposite angles are equal}$$

$$\hat{GFH} = 53^\circ \quad \text{alternate angles are equal}$$

$$\hat{EFH} = 127 \quad \text{angles on a straight line add to } 180^\circ$$

$$x = 25^\circ \quad \text{angles in a triangle add to } 180^\circ$$

.....25.....
 (3 marks)