

# Angle Facts - parallel lines

How to... You must give reasons!!

$$180 - (90 + 35) = 55^\circ$$

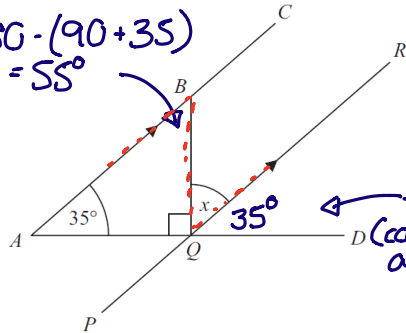


Diagram NOT accurately drawn

← this is  $35^\circ$  (corresponding angles are equal)

$ABC$ ,  $PQR$  and  $AQD$  are straight line.  $ABC$  is parallel to  $PQR$ .

Angle  $BAQ = 35^\circ$

Angle  $BQA = 90^\circ$

Work out the size of the angle marked  $x$ .

Give reasons for each stage of your working.

There are a few routes to getting your answer... I have shown one ...

① Angle  $BQD = 55^\circ$  (angles in a triangle add up to  $180^\circ$ )

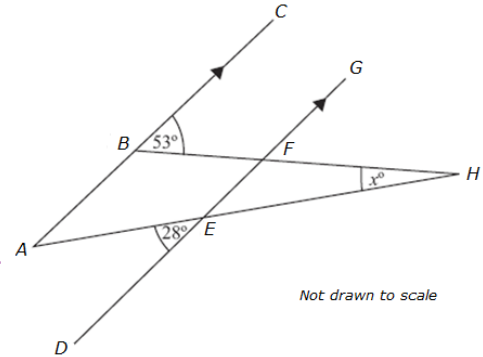
② Angle  $x = 55^\circ$   
alternate angles are equal.

(MAKE SURE YOU STATE YOUR ANSWER)  $x = 55^\circ$

(4)

Now have a go yourself ...

Q1.  $ABC$  and  $DEFG$  are parallel.  $AEH$  and  $BFH$  are straight lines. Work out the size of the angle marked  $x$ , giving reasons for your answers.



Not drawn to scale

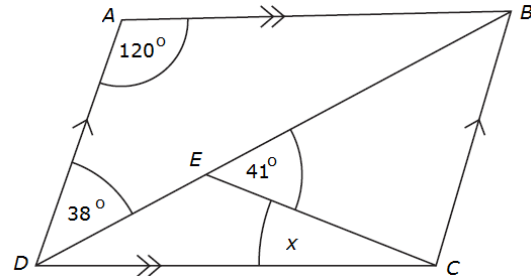
Q2.  $ABCD$  is a parallelogram.

Angle  $ADB = 38^\circ$

Angle  $BEC = 41^\circ$

Angle  $DAB = 120^\circ$

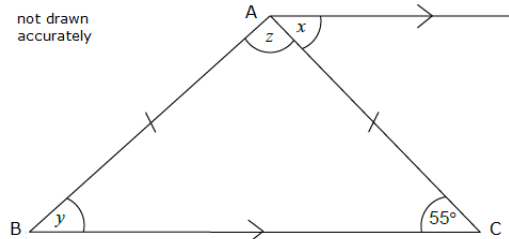
Calculate the size of the angle  $x$ . You must give reasons for your answer.



## Exam Question

Q1.  $ABC$  is an isosceles triangle with  $AB = AC$ .  $BC$  is parallel to  $AD$  and angle  $BCA = 55^\circ$

not drawn accurately



Work out the sizes of the angles marked  $x$ ,  $y$  and  $z$  giving reasons for your answers.

(4)

Q2.  $CDEF$  is a straight line.  $AB$  is parallel to  $CF$  and  $DE = AE$ . Work out the size of the angle marked  $x$ . You must give reasons for your answer.

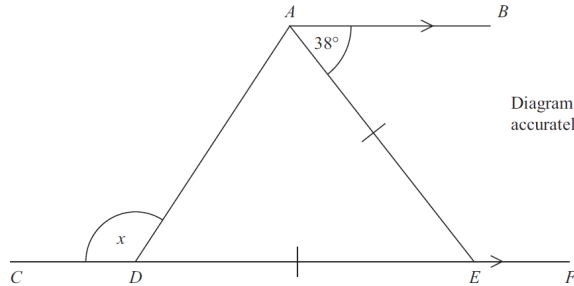


Diagram NOT accurately drawn

(4)

## Ready to be marked ?

### Checklist



- Answer checked
- Reasons given

### Keywords



-----

-----

-----

### Things to remember ...



-----

-----

-----

### What went well ...



-----

-----

-----

### Teacher comment ..