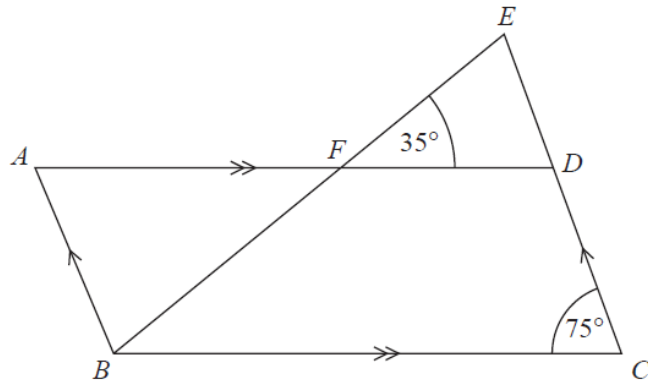


1



$ABCD$ is a parallelogram.

EDC is a straight line.

F is the point on AD so that BFE is a straight line.

Angle $EFD = 35^\circ$

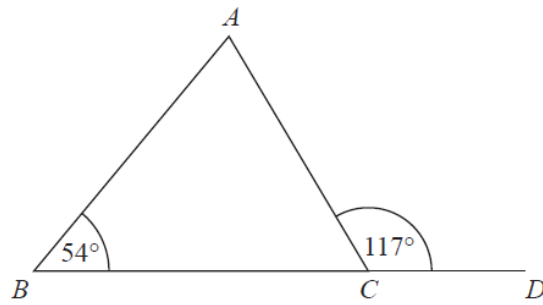
Angle $DCB = 75^\circ$

Show that angle $ABF = 70^\circ$

Give a reason for each stage of your working.

(Total for Question is 4 marks)

2



BCD is a straight line.

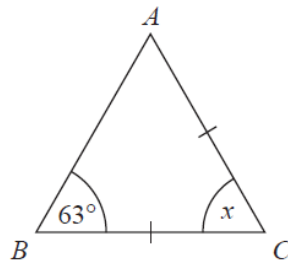
ABC is a triangle.

Show that triangle ABC is an isosceles triangle.

Give a reason for each stage of your working.

(Total for Question is 4 marks)

- 3 Mary needs to work out the size of angle x in this diagram.



She writes

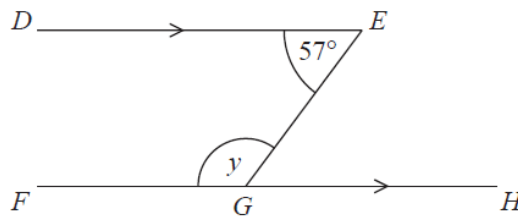
$x = 63^\circ$ because base angles of an isosceles triangle are equal.

Mary is wrong.

- (a) Explain why.

(1)

William needs to work out the size of angle y in this diagram.



William writes

Working	Reason
angle $EGH = 57^\circ$	because corresponding angles are equal
$y = 180^\circ - 57^\circ$ $y = 123^\circ$	because angles on a straight line add up to 180°

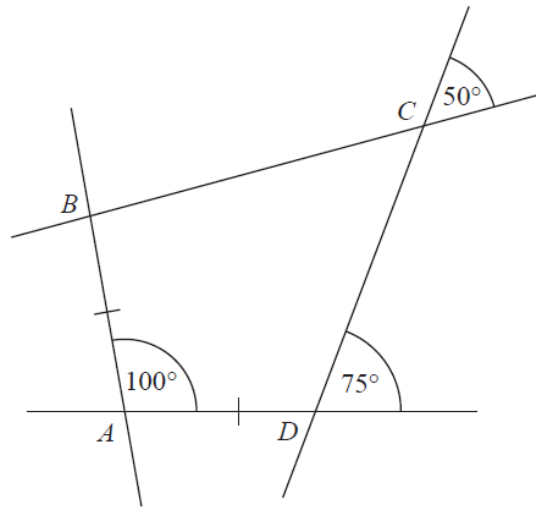
One of William's reasons is wrong.

- (b) Write down the correct reason.

(1)

(Total for Question is 2 marks)

- 4 The diagram shows quadrilateral $ABCD$ with each of its sides extended.



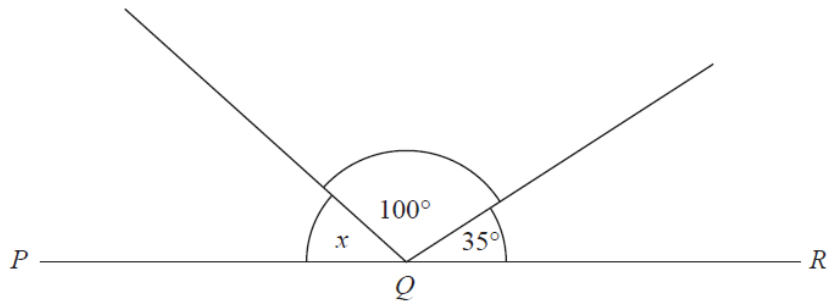
$$AB = AD$$

Show that $ABCD$ is a kite.

Give a reason for each stage of your working.

(Total for Question is 4 marks)

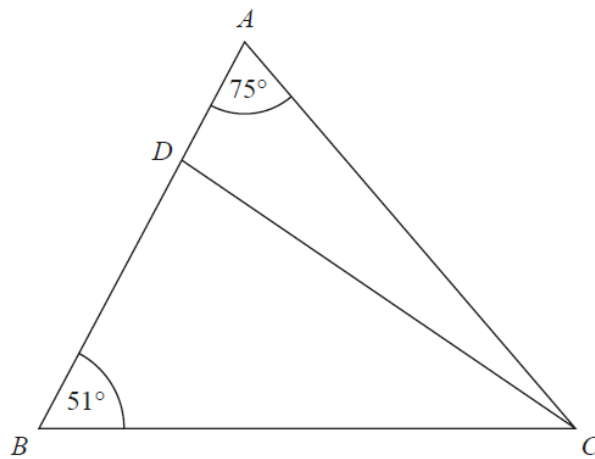
5 PQR is a straight line.



Work out the size of angle x .

.....
(Total for Question is 2 marks)

- 6 The diagram shows triangle ABC .



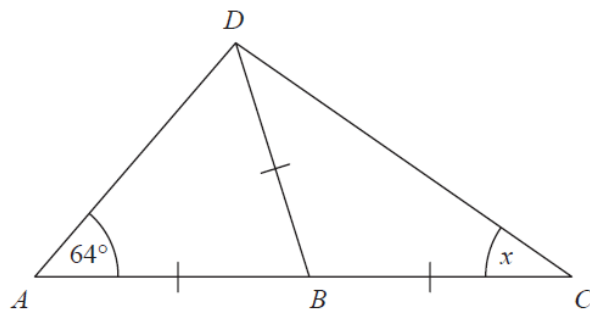
ADB is a straight line.

the size of angle DCB : the size of angle $ACD = 2 : 1$

Work out the size of angle BDC .

.....
(Total for Question is 4 marks)

7



ABC is a straight line.

$AB = BC = BD$.

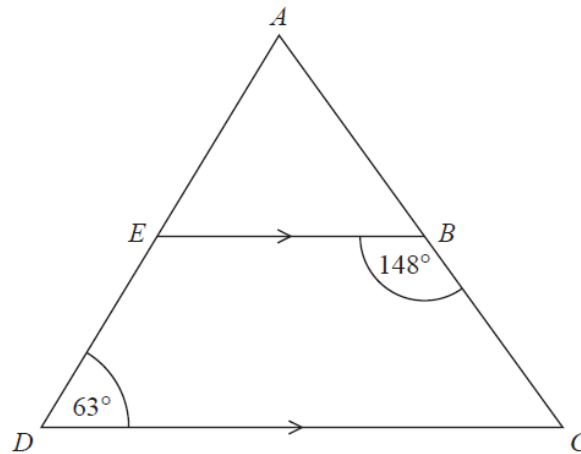
Angle $DAB = 64^\circ$

Work out the size of the angle marked x .

Give a reason for each stage of your working.

(Total for Question is 4 marks)

8 ADC is a triangle.



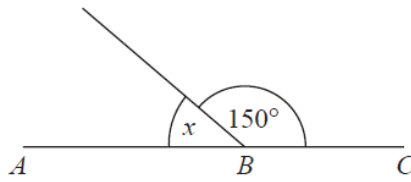
AED and ABC are straight lines.
 EB is parallel to DC .

Angle $EBC = 148^\circ$
Angle $ADC = 63^\circ$

Work out the size of angle EAB .
You must give a reason for each stage of your working.

(Total for Question is 5 marks)

9



ABC is a straight line.

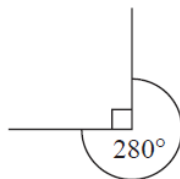
(a) (i) Work out the size of the angle marked x .

.....
(1)

(ii) Give a reason for your answer.

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

The diagram below is wrong.

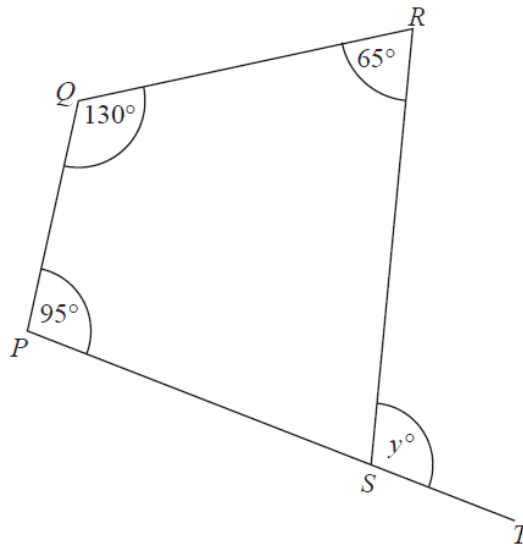


(b) Explain why.

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

(Total for Question is 3 marks)

- 10 $PQRS$ is a quadrilateral.
 PST is a straight line.

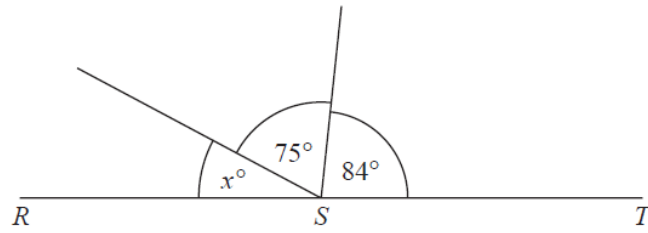


Find the value of y .

$$y = \dots\dots\dots$$

(Total for Question is 3 marks)

11



RST is a straight line.

(i) Work out the value of x .

.....
(2)

(ii) Give a reason for your answer.

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

(Total for Question is 3 marks)