Name: _____

GCSE (1 – 9)

Angles

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

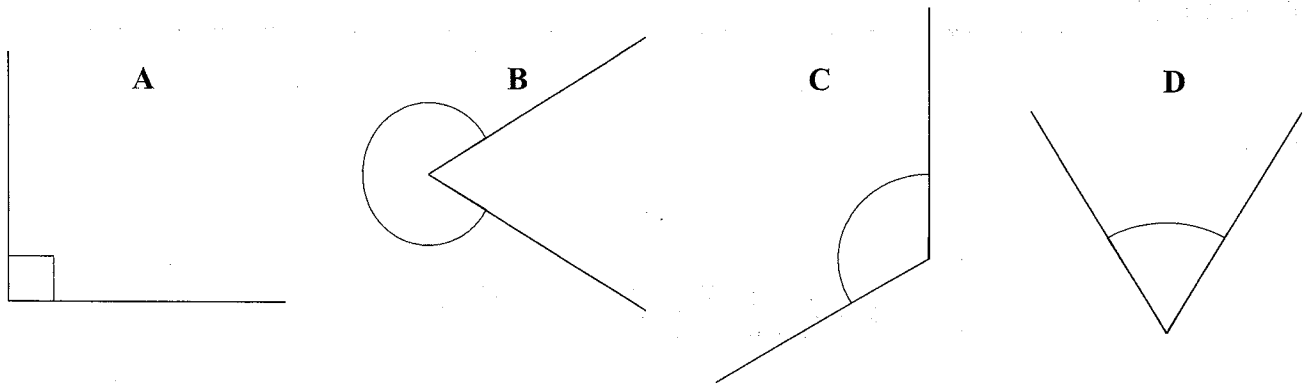
Information

- The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 Here are four angles A, B , C and D.



(a) Measure the size of angle C.

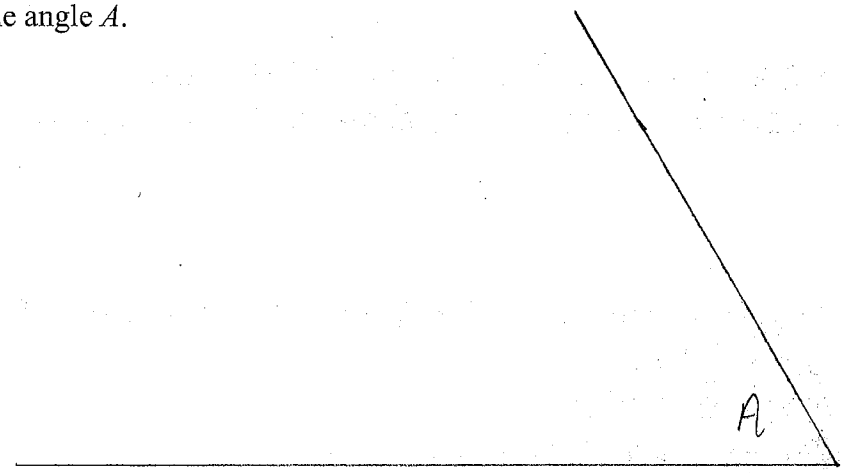
120 °

(b) Match the angle mathematical name to the angle.

Mathematical Name	Angle
Acute Angle	D
Obtuse Angle	C
Right Angle	A
Reflex Angle	B

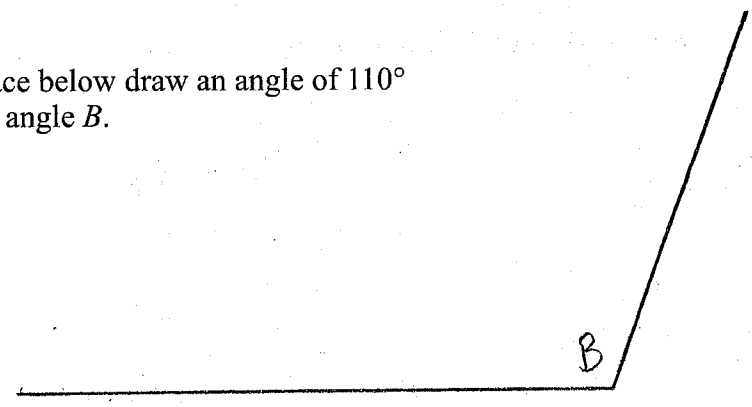
(Total for question 7 is 3 marks)

2 In the space below draw an angle of 60°
Label the angle *A*.



(Total for question 2 is 1 mark)

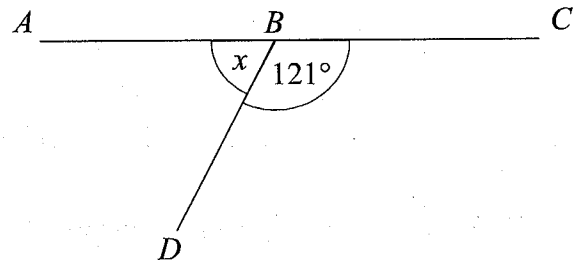
3 In the space below draw an angle of 110°
Label the angle *B*.



(Total for question 3 is 1 mark)

Diagrams are NOT accurately drawn, unless otherwise indicated.

4 *ABC* is a straight line. Work out the size of the angle marked *x*.

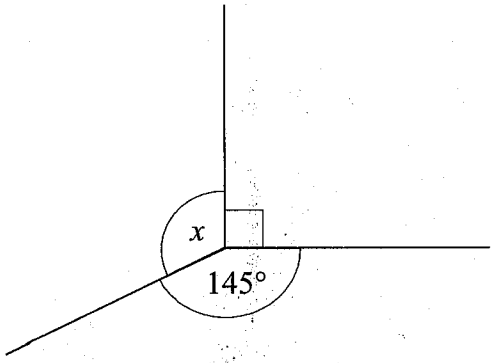


180 − 121

59 °

(Total for question 4 is 2 marks)

5 Work out the size of the angle marked *x*.



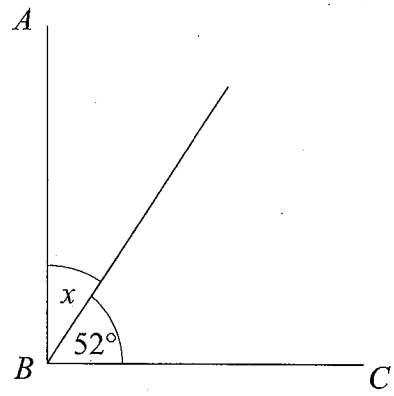
90 + 145 = 235

360 − 235 = 125

125 °

(Total for question 5 is 2 marks)

6 *AB* and *BC* are perpendicular lines. Work out the size of the angle marked *x*.

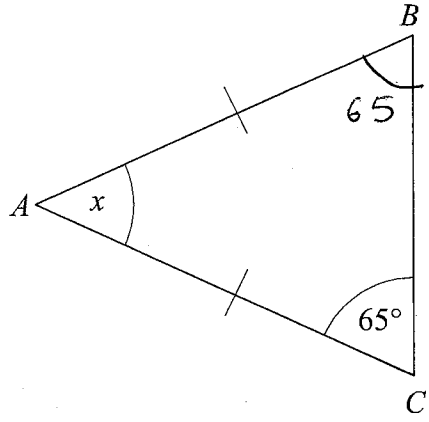


90 − 52

38 °

(Total for question 6 is 2 marks)

7 *ABC* is an isosceles triangle Work out the size of the angle marked *x*.



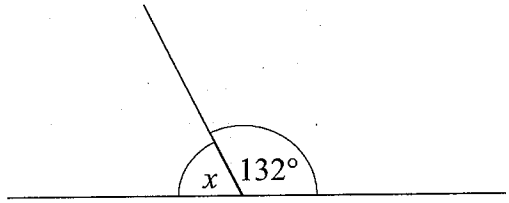
65 + 65 = 130

180 − 130 = 50

50 °

(Total for question 7 is 2 marks)

8



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

180 − 132

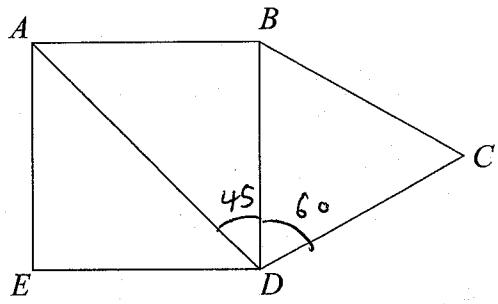
48 °

(b) Give a reason for your answer.

Angles on a straight line add to 180°

(Total for question 8 is 2 marks)

9 The diagram shows a square $ABDE$ and an equilateral triangle BCD.



(a) Write down the size of angle ABD

90 °

(b) Write down the size of angle BCD

(c) Find the size of angle ADC

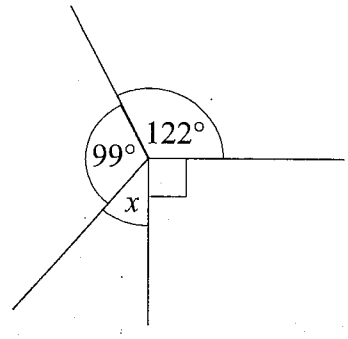
60 °

45 + 60

105 °

(Total for question 9 is 4 marks)

10



$99 + 122 = 221$

$221 + 90 = 311$

$360 - 311 = 49$

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

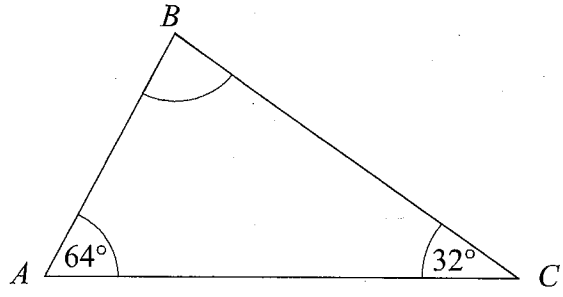
49 °

(b) Give a reason for your answer.

Angles around a point add to 360°

(Total for question 10 is 2 marks)

11



$64 + 32 = 96$

$180 - 96 = 84$

(a) Work out the size of the angle ABC.

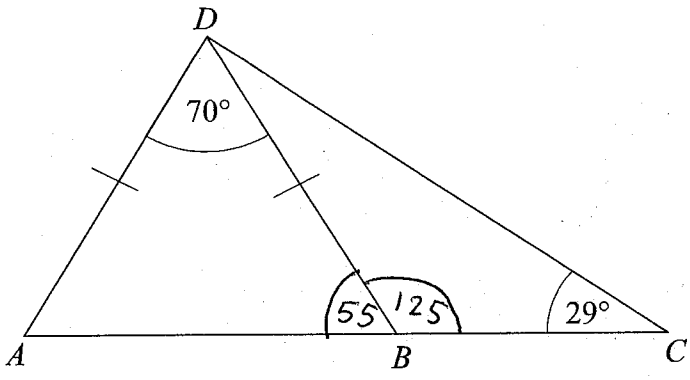
84 °

(b) Give a reason for your answer.

Angles in a triangle add to 180°

(Total for question 11 is 2 marks)

12 *ABC* is a straight line. Work out the size of the angle *BDC*.



$180 - 70 = 110$

$\frac{110}{2} = 55$

$180 - 55 = 125$

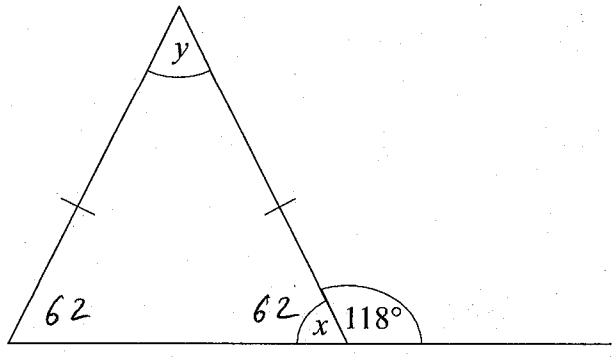
$125 + 29 = 154$

$180 - 154 = 26$

26 °

(Total for question 12 is 4 marks)

13



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

$180 - 118$

62 °

(b) Work out the size of the angle marked *y*.

$62 + 62 = 124$

$180 - 124$

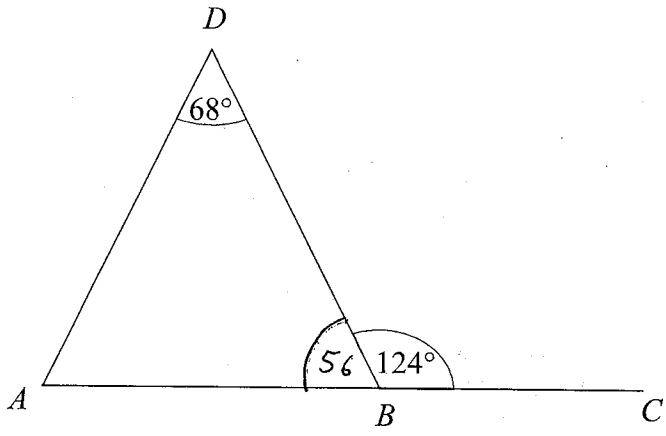
56 °

(c) Give a reason for your answer.

Angles at the base of an isosceles triangle are equal AND angles in a triangle add to 180°

(Total for question 13 is 3 marks)

14 *ABC* is a straight line.



180 − 124 = 56

Show that *ABD* is an isosceles triangle

ABD = 56° Angles on a straight line add to 180°

56 + 68 = 124

180 − 124 = 56

DAB = 56° Angles in a triangle add to 180°

Two angles equal ∴ isosceles triangle

(Total for question 14 is 4 marks)