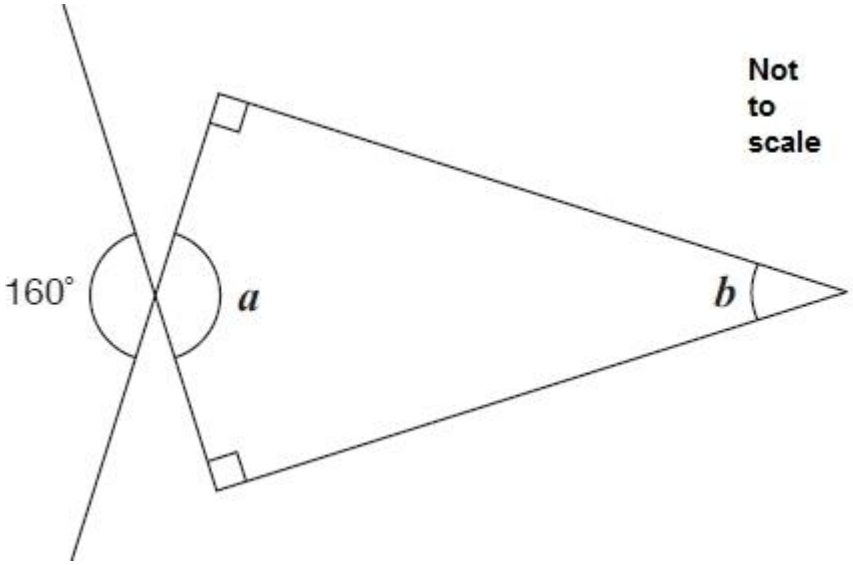
Q1.

Calculate the size of angles a and b in this diagram.



$a =$ ____ °

1 mark

$b =$ ____ °

1 mark

Q2.

Anna has four **different** triangles.

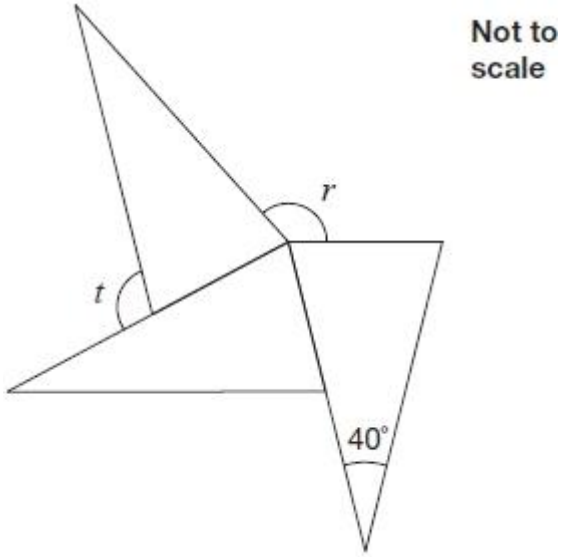
Complete the table to show the size of the angles in each triangle.

Type of triangle	Angle 1	Angle 2	Angle 3
Isosceles	90°		
Right-angled	80°		
Isosceles	70°		
Isosceles	70°		

2 marks

Q3.

The diagram shows three **identical** isosceles triangles.



What are the sizes of angles *r* and *t*?

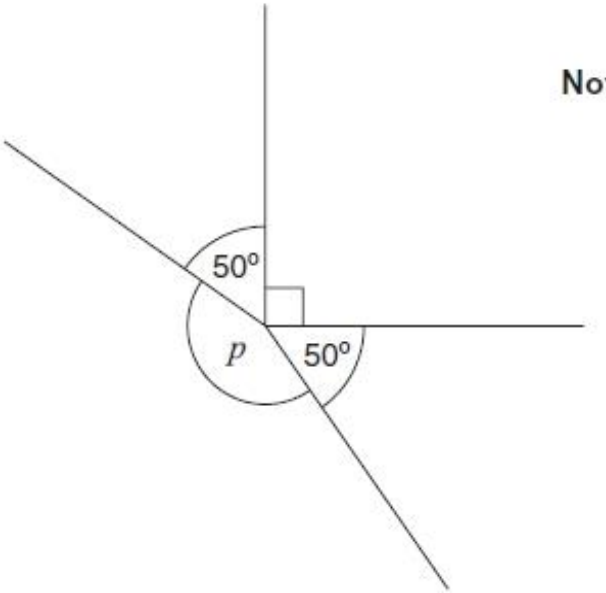
Show your method

r = °

t = °

2 marks

Q4.



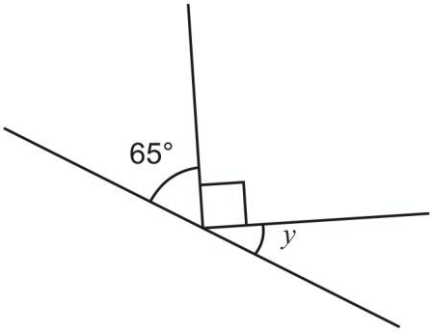
Calculate the size of angle ***p*** in the diagram.

Do **not** use a protractor (angle measurer).

Show your method

2 marks

Q5.



Not to scale

Calculate the size of angle ***y*** in this diagram.

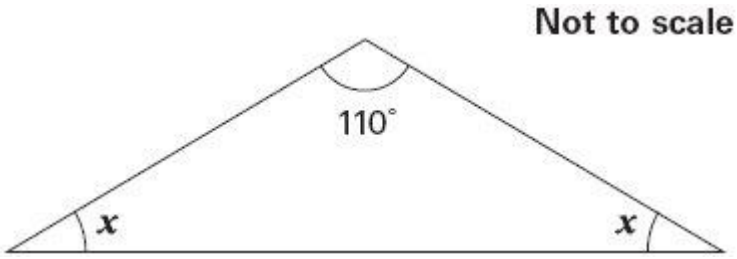
Do **not** use a protractor (angle measurer).

°

1 mark

Q6.

Here is an isosceles triangle.



Calculate the size of angle x.

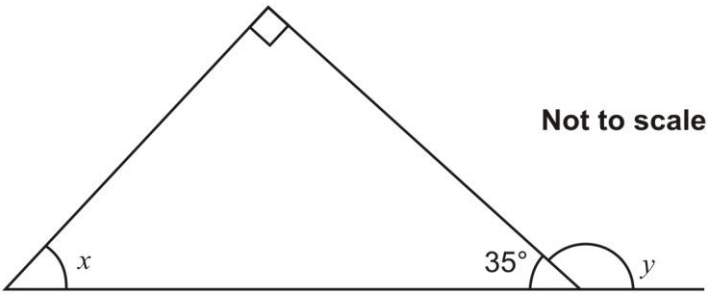
Do **not** use a protractor (angle measurer).

°

1 mark

Q7.

Look at this diagram.



Calculate the size of angle ***x*** and angle ***y***.

Do **not** use a protractor (angle measurer).

$x =$ °

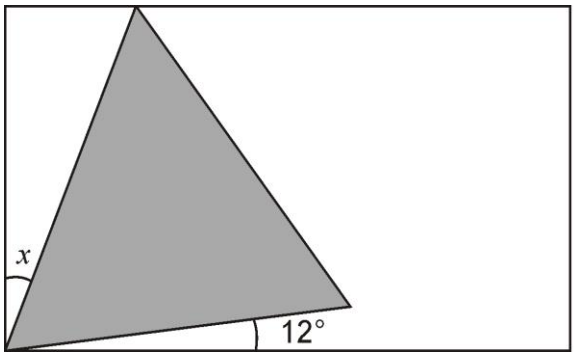
1 mark

$y =$ °

1 mark

Q8.

Here is an **equilateral triangle** inside a **rectangle**.



Not to scale

Calculate the value of angle x.

Do **not** use a protractor (angle measurer).

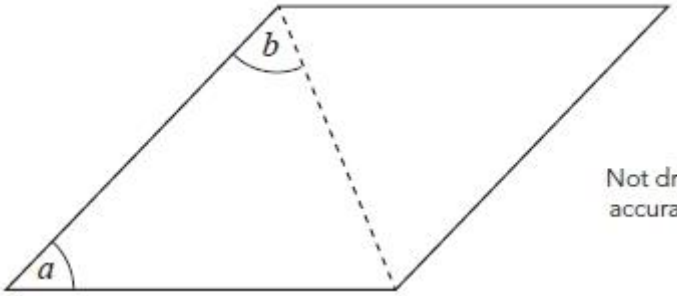
Show your method

°

2 marks

Q9.

The dotted line is a diagonal of this **rhombus**.



Not drawn accurately

If angle $a = 80°$, what is angle b?

°

Show your method

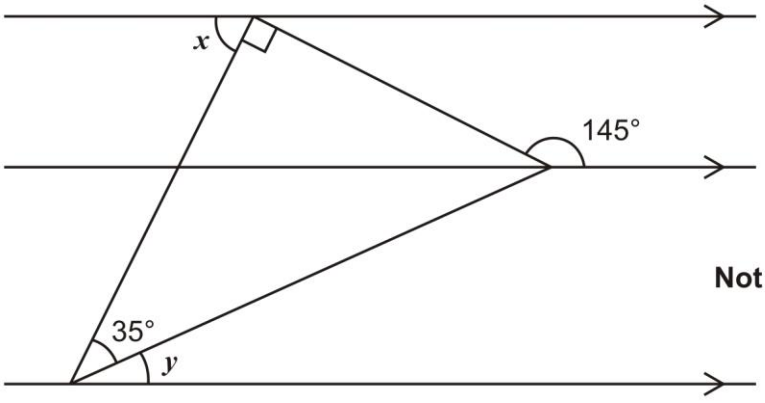
If angle $b = 80°$, what is angle a?

°

3 marks

Q10.

The diagram shows a right-angled triangle and three parallel lines.



Not to scale

Calculate the size of angle x and angle y

Do **not** use a protractor (angle measurer).

$x =$ ____ °

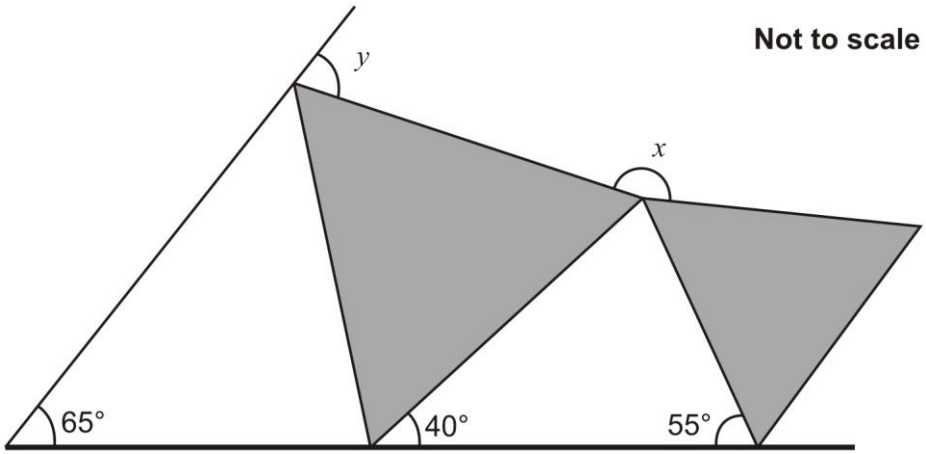
1 mark

$y =$ ____ °

1 mark

Q11.

The diagram shows two shaded **equilateral triangles**.



Calculate the size of the **angle x°** and **angle y**

Do **not** use a protractor (angle measurer).

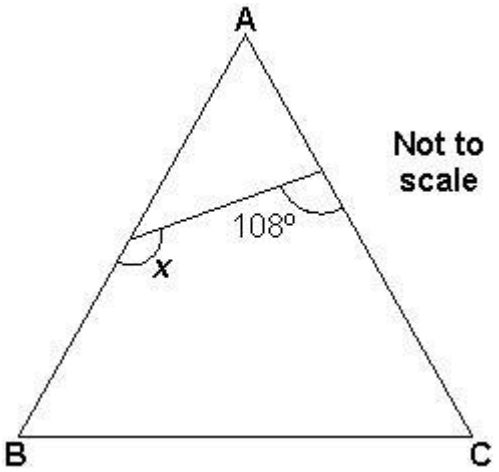
$x =$ ____ °

$y =$ ____ °

2 mark

Q12.

Triangle **ABC** is **equilateral**.



Calculate the size of **angle *x***.

Do not use an angle measurer (protractor).

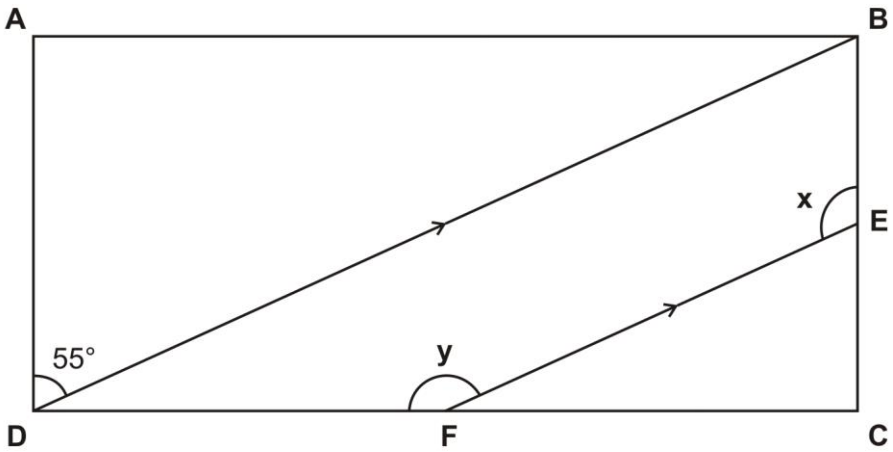
x =

1 mark

Q13.

The shape **ABCD** is a **rectangle**.

BD is **parallel** to **EF**.



Not to scale

Calculate the sizes of the angles **x** and **y**.

Do **not** use an angle measurer (protractor).

x =

$y =$

2 mark

Q1.

(a) 160

1

(b) 20

*If the answers to a and b are incorrect, award **ONE** mark if a + b = 180° unless b is between 33° and 37° inclusive, or 90°.*

1

[2]

Q2.

Completes all four rows of the table correctly, eg:

90°	**45°**	**45°**
80°	**90°**	**10°**
70°	**70°**	**40°**
70°	**55°**	**55°**

Accept angles within a row in either order

Accept the bottom two rows may be given in either order

! Condone omission of degree signs

! For 2 marks, do not accept correct angles in 3rd row repeated in 4th row, in either order

2

or

Completes three rows correctly

1

[2]

Q3.

r = 150 **and** *t* = 110

Values must be unambiguously associated with the correct letter for the award of 2m or 1m

2

or

r **or** t correct

OR

Shows or implies a complete, correct method for both angles, eg:

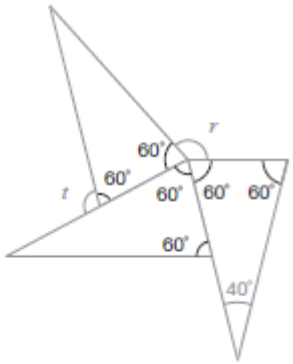
- 40 + 50 + 50 = 180 *(error)*
  360 − 50 − 50 − 50 = 210
  180 − 50 = 130

  ! Answers for r and t transposed

  If r is 110 and t is 150, then award 1m

  ! Follow-through from incorrect base angle seen on the diagram

  Award 1m if both r and t correctly follow through from an incorrect angle seen at base of an isosceles triangle, eg:

- 

r = 360 − 180 = 180

t = 180 − 60 = 120

1

[2]

Q4.

Award **TWO** marks for correct answer of 170°

Up to 2

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg:

- 50 + 50 + 90 = 190

  360 – 190

OR

- 360 – 50 – 50 – 90

  *Answer need not be obtained for the award of **ONE** mark.*

Up to 2

[2]

Q5.

25

[1]

Q6.

x = 35°

[1]

Q7.

(a) x = **55°**

1

(b) y = **145°**

*If the answers for (a) and (b) are transposed, but otherwise correct, award **ONE** mark only, in the (b) box.*

1

[2]

Q8.

Award **TWO** marks for the correct answer of 18°

Calculation need not be performed for the award of the mark.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg 90 – 60 – 12

Up to 2

[2]

Q9.

b = 50

1

a = 20

1
U1

As evidence of a correct method, in either part, shows or implies that the angles in one of the triangles are a, b and b

eg, in the first question part

- 80, 50, 50 seen
- (180 – 80) ÷ 2
- (360 – 160) ÷ 2 ÷ 2

eg, in the second question part

- 180 – 2 × 80
- (360 – 160 × 2) ÷ 2

eg, correct answers transposed

! Incomplete or no working shown

Provided at least one correct angle is credited, award this mark

! In the second question part 80, 80, 20 is insufficient without any indication of the position of the equal angles

1

[3]

Q10.

(a) $x =$ 55°

1

(b) $y =$ 20°

OR y = (Answer to (a) – 35°)

If answers to x *and* y *are transposed but otherwise correct, award **ONE** mark only in the (b) box.*

1

[2]

Q11.

(a) $x = 155°$

1

(b) $y = 85°$

*If answers for 5a and 5b are transposed, but otherwise correct, award **ONE** mark only, in the 5b box.*

1

[2]

Q12.

132

[1]

Q13.

Award **TWO** marks for the correct answers $x = 125$ **AND** $y = 145$.

If the answers are incorrect award **ONE** mark for either $x = 125$ **OR** $y = 145$ **OR** the sum of x and y being 270.

up to 2

[2]