



Foundation Tier

Angles (Basics)

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

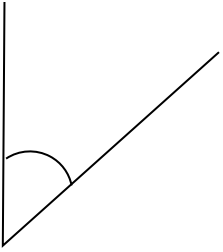
Information

- 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

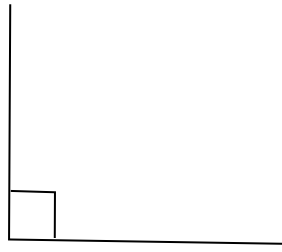
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

1. Here are four angles. For each angle, measure the size and write down the mathematical name of the type of angle.



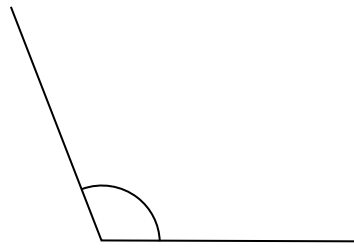
51

°



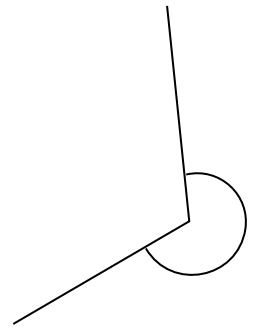
90

°



119

°



250

°

Acute

Right-angle

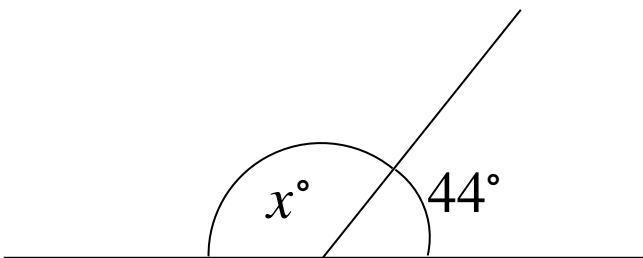
Obtuse

Reflex

(Total for Question 1 is 2 marks)

2. Find the size of the angle marked x°

$$180 - 44 = 136$$



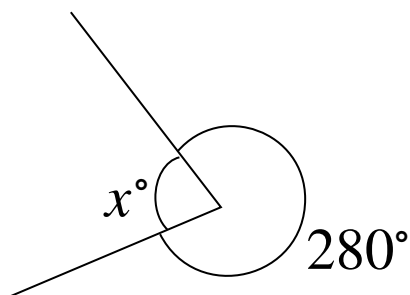
136

°

(Total for Question 2 is 2 marks)

3. Find the size of the angle marked x°

$$360 - 280 = 80$$

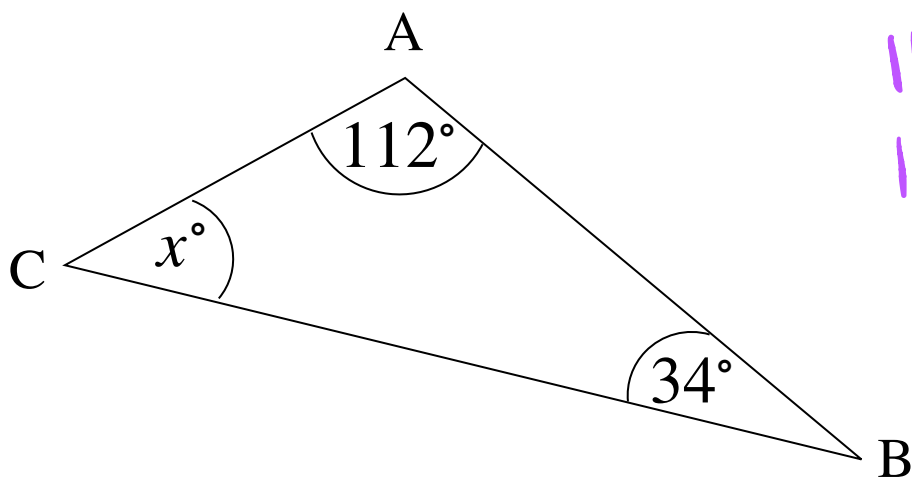


80

°

(Total for Question 3 is 2 marks)

4. ABC is a triangle. Find the size of the angle marked x°

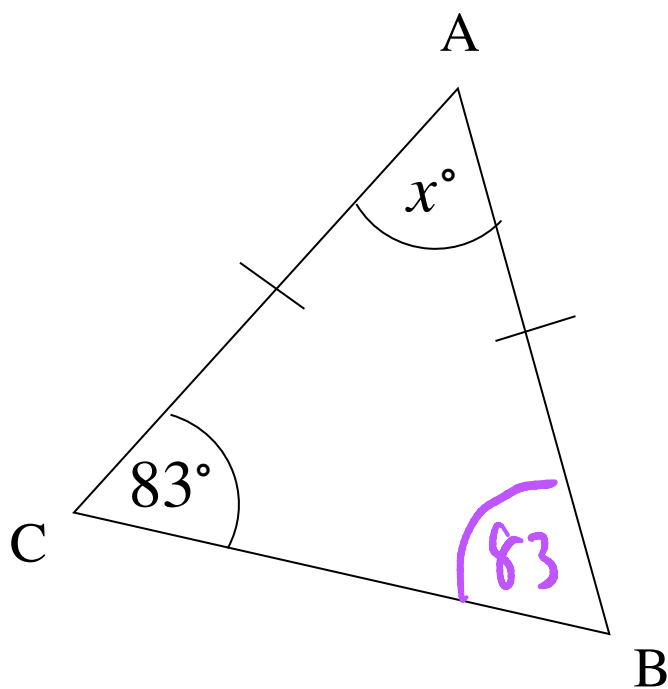


$$112 + 34 = 146$$
$$180 - 146 = 34$$

.....
34 °

(Total for Question 4 is 2 marks)

5. ABC is an isosceles triangle. Find the size of the angle marked x°

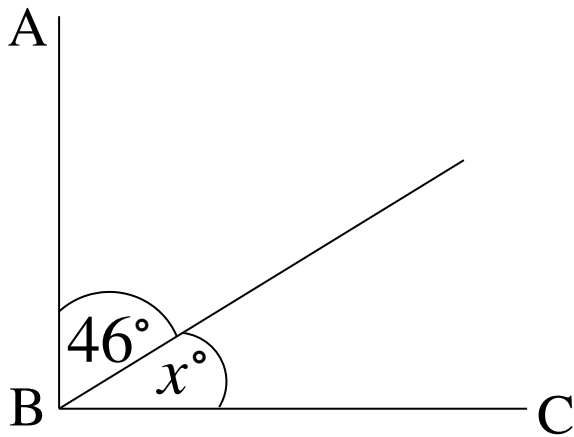


$$83 + 83 = 166$$
$$180 - 166 = 14^\circ$$

.....
14 °

(Total for Question 5 is 2 marks)

6. AB and BC are perpendicular lines. Find the size of the angle marked x° .

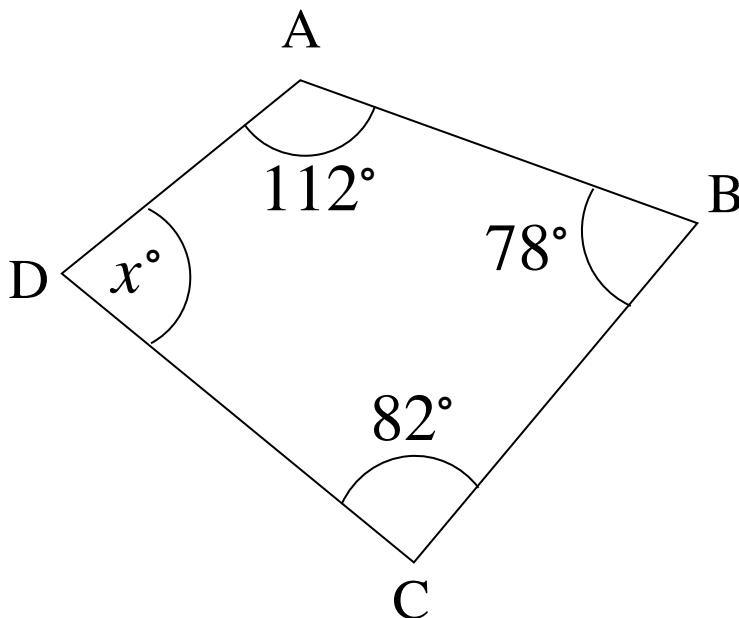


$$90 - 46 = 44$$

.....
44 °

(Total for Question 6 is 2 marks)

7. Below is quadrilateral ABCD. Find the size of the angle ADC.



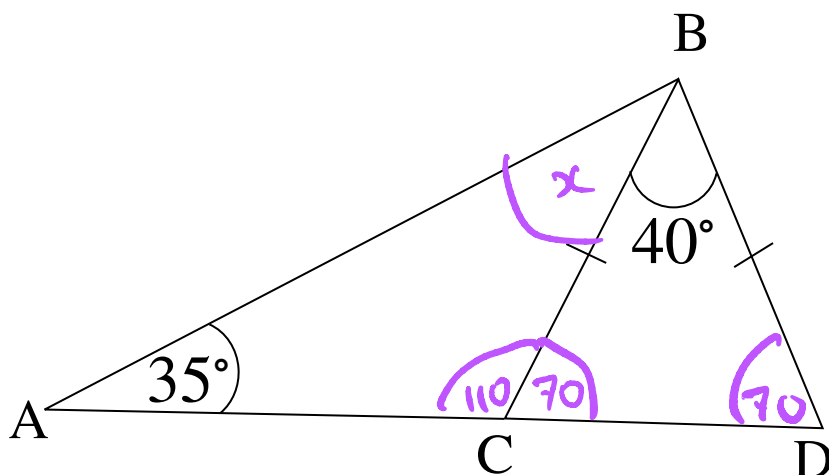
$$112 + 78 + 82 = 272$$

$$360 - 272 = 88$$

.....
88 °

(Total for Question 7 is 2 marks)

8. ACD is a straight line. Find the size of angle ABC.



$$180 - 40 = 140$$

$$140 \div 2 = 70$$

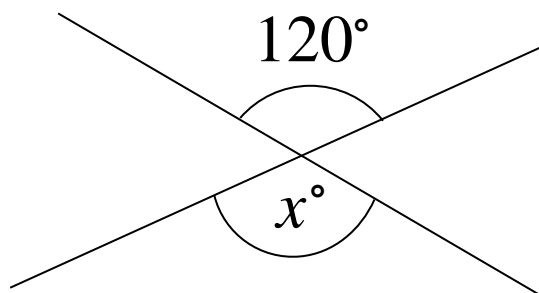
$$110 + 35 = 145$$

$$180 - 145 = 35$$

25 °

(Total for Question 8 is 3 marks)

9. Work out the size of the angle marked x°



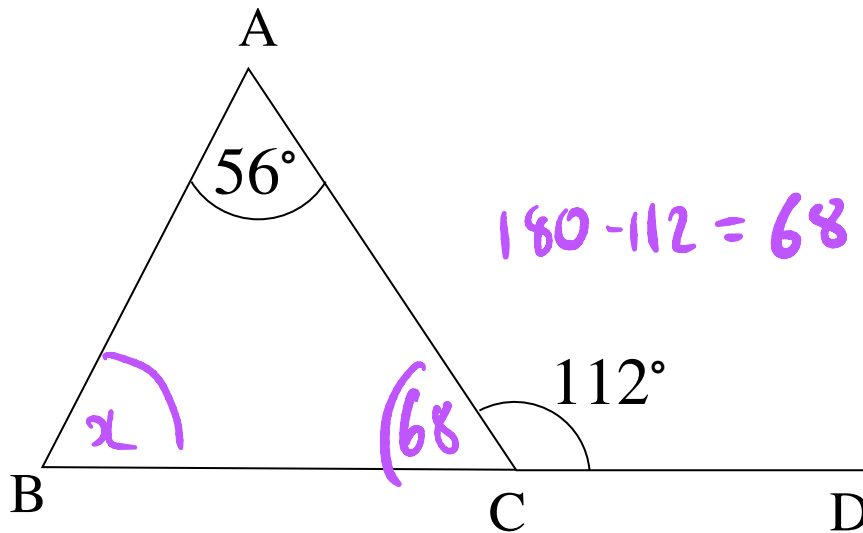
You must give reason for your answer.

Vertically opposite
angles are equal

120 °

(Total for Question 9 is 2 marks)

10. BCD is a straight line. Find the size of angle ABC.



$$180 - 112 = 68$$

(68)

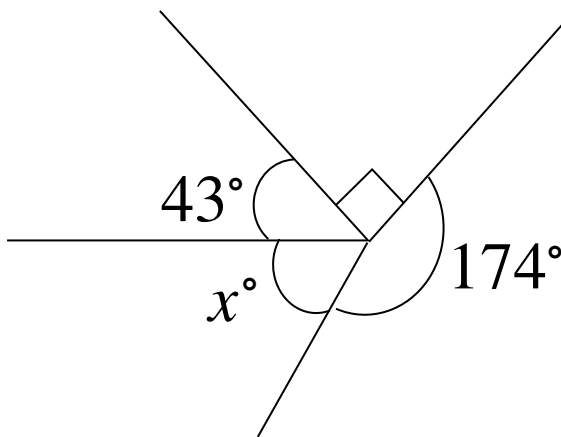
$$68 + 56 = 124$$

$$180 - 124 = 56$$

..... 56 °

(Total for Question 10 is 3 marks)

11. Find the size of the angle marked x°



$$174 + 90 + 43 = 307$$

$$360 - 307 = 53$$

You must give reason for your answer.

Angles around a point
sum to 360° .

..... 53 °

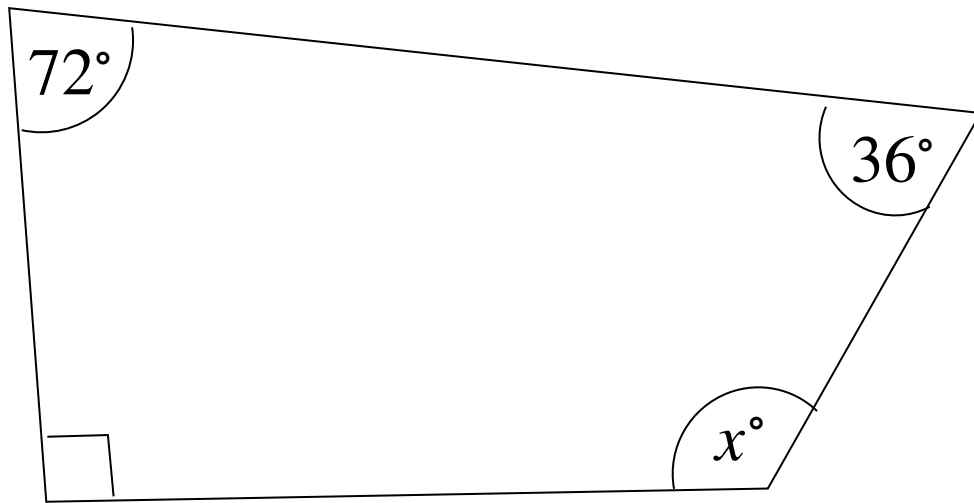
(Total for Question 11 is 3 marks)

12. Work out the size of the angle marked x° .

You must give reason for your answer.

$$72 + 36 + 90 = 198$$

$$360 - 198 = 162$$



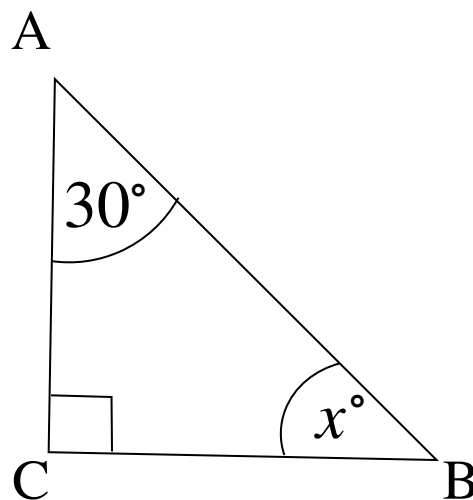
Angles in a quadrilateral
Sum to 360° .

.....
 162°

(Total for Question 12 is 2 marks)

13. Work out the size of the angle ABC.

You must give reason for your answer.



$$90 + 30 = 120$$

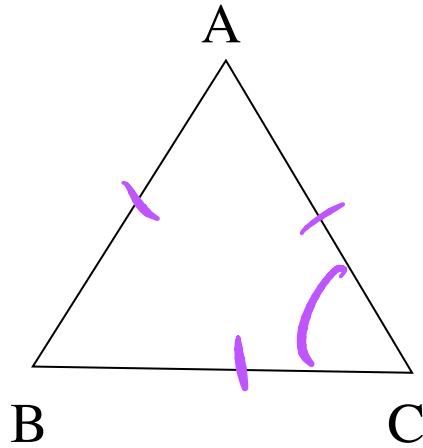
$$180 - 120 = 60$$

Angles in a triangle
Sum to 180° .

.....
 60°

(Total for Question 13 is 2 marks)

14. Below is an equilateral triangle. Find the size of the angle ACB.

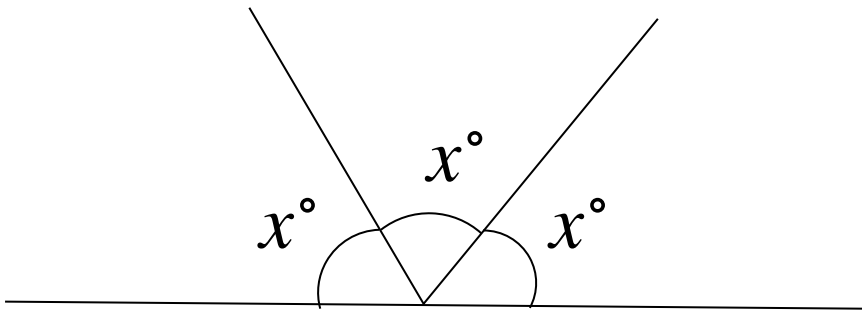


$$180 \div 3 = 60$$

60°

.....
(Total for Question 14 is 2 marks)

15. Find the size of x° .

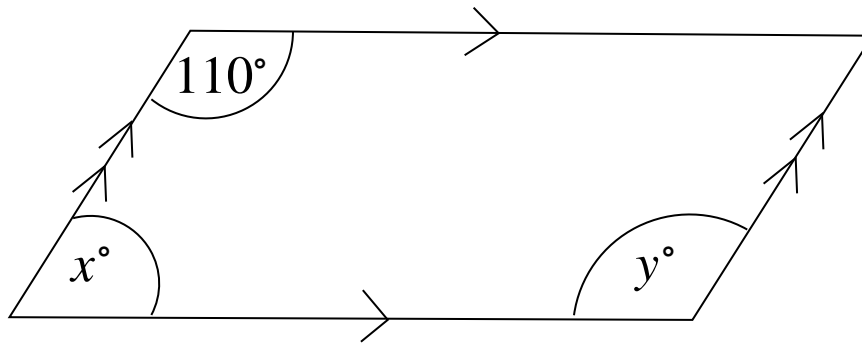


$$180 \div 3 = 60$$

60°

.....
(Total for Question 15 is 2 marks)

16. Below is a parallelogram.



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

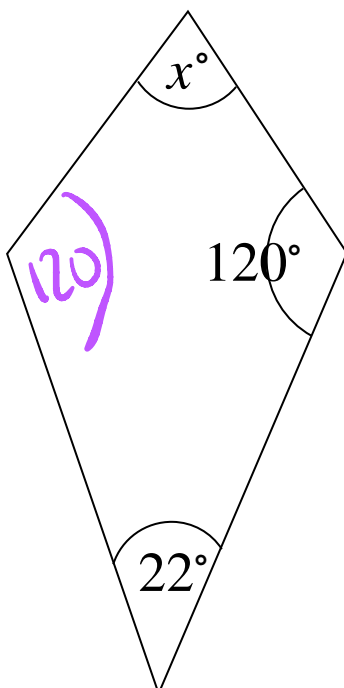
70 °
.....
(1)

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

110 °
.....
(1)

(Total for Question 16 is 2 marks)

17. Below is a kite. Find the size of x° .



$$120 \times 2 = 240$$

$$240 + 22 = 244$$

$$360 - 244 = 116$$

116 °
.....

(Total for Question 17 is 2 marks)