Your notes

GCSE Maths: revision notes

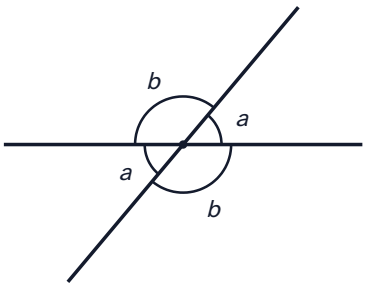
Angles and parallel lines

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Angle facts

- Angles on a straight line add up to 180°. Angles around a point add up to 360°.
- **Vertically opposite angles** are equal.
- Angles in a triangle add up to 180°. Angles in a quadrilateral add up to 360°.
- **Acute angles** are less than 90°, right angles are 90°, **obtuse angles** are between 90° and 180°, and **reflex angles** are between 180° and 360°.



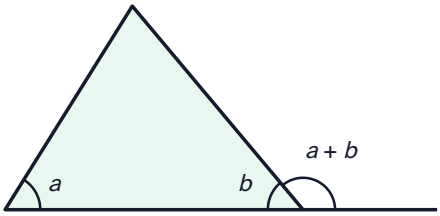
Parallel lines

- **Alternate angles** are equal (they make a Z shape).
- **Corresponding angles** are equal (they make an F shape).
- **Co-interior angles** add up to 180° (they make a C shape).

Triangles

- The two base angles of an **isosceles triangle** are equal.
- Each angle in an equilateral triangle is 60°.

- The exterior angle of a triangle equals the sum of the two opposite interior angles.

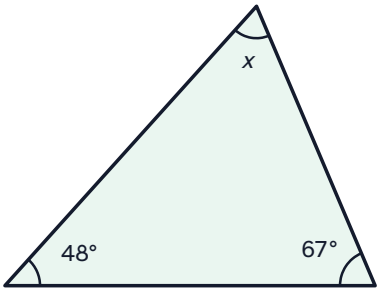


Giving reasons

- In the exam, give a reason for each step using the proper words, such as '**alternate angles** are equal'. Don't write 'Z angles'.

Worked examples

Two angles in a triangle are 48° and 67°. Find the third angle.



Angles in a triangle add up to 180°. **48 + 67 = 115**

Subtract from 180°. **180 – 115 = 65**

Answer: 65°

Key terms

Acute angle	An angle less than 90°.
Obtuse angle	An angle between 90° and 180°.
Reflex angle	An angle between 180° and 360°.
Vertically opposite angles	The equal angles opposite each other where two straight lines cross.
Alternate angles	Equal angles on opposite sides of a line crossing two parallel lines (a Z shape).

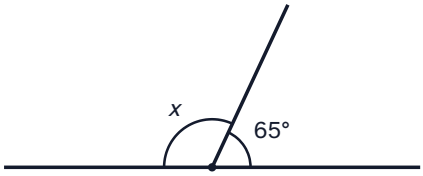
Your notes

Corresponding angles	Equal angles in matching positions on parallel lines (an F shape).
Co-interior angles	Angles between two parallel lines on the same side, which add up to 180° (a C shape).
Isosceles triangle	A triangle with two equal sides and two equal angles.

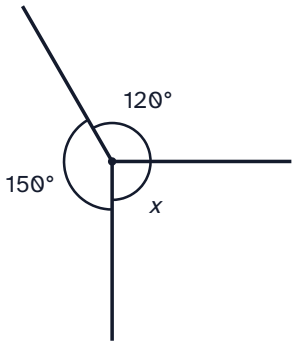
Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

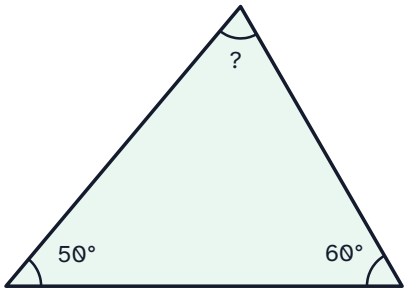
1. Two angles on a straight line are 65° and x. What is x?



2. Three angles around a point are 120°, 150° and x. What is x?

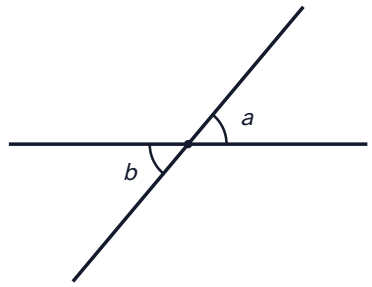


3. A triangle has angles of 50° and 60°. What is the third angle?

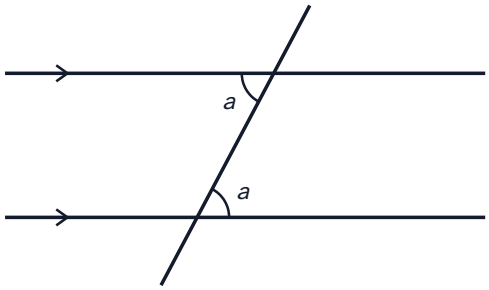


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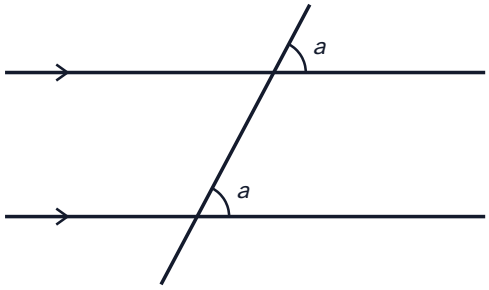
4. What is true about vertically opposite angles?



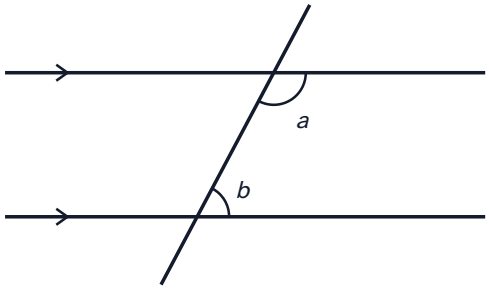
5. Which angles on parallel lines are equal and make a Z shape?



6. Which angles on parallel lines make an F shape?

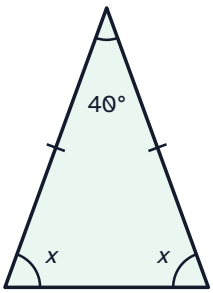


7. What do co-interior angles on parallel lines add up to?



Your notes

8. An isosceles triangle has a top angle of 40°. What is each base angle?



Answers

1. 115°
2. 90°
3. 70°
4. They are equal
5. Alternate angles
6. Corresponding angles
7. 180°
8. 70°

What to do next

Practise 12 questions on this topic

Try 6 exam questions, with mark schemes

Read the lesson, one step at a time

Free revision for GCSE and KS3 at lycolearn.co.uk. Some notes are for one exam board only, and say so in brackets.

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