



JP Maths

Revision



Attempt the paper
before watching the
solutions!

[https://www.youtube.com/
@JPMathsRevision](https://www.youtube.com/@JPMathsRevision)



FOUNDATION / HIGHER TIER

Angles in parallel lines



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.*



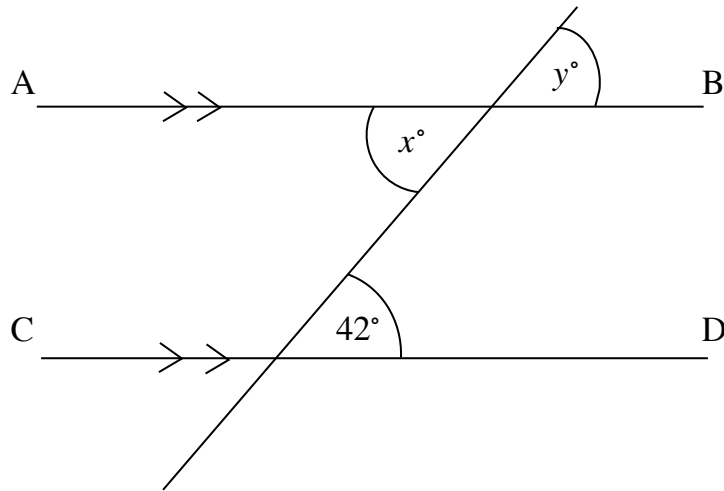
ADVICE

- 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.



You've got this! 

1. AB and CD are parallel lines.



- (a) Write down the size of the angle marked x° .

42°
(1)

- (b) Give reason for your answer.

Alternate angles are equal.
(1)

- (c) Write down the size of the angle marked y° .

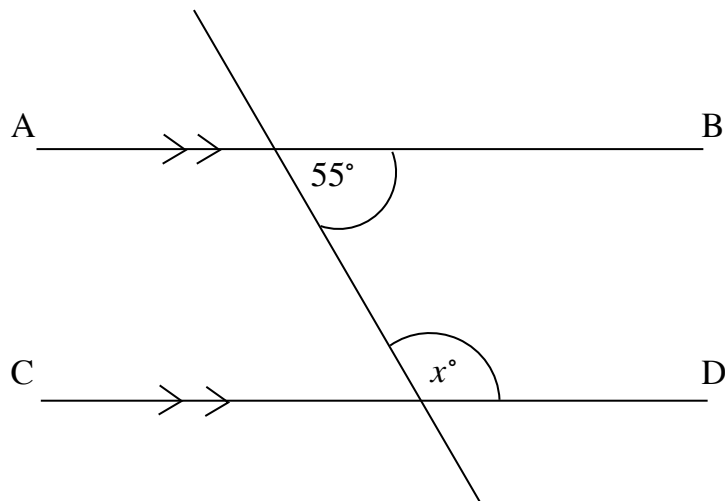
42°
(1)

- (d) Give reason for your answer.

Corresponding angles are equal.
(1)

(Total for Question 1 is 4 marks)

2. AB and CD are parallel lines.



- (a) Write down the size of the angle marked x° .

$$180 - 55 =$$

$$125^\circ$$

(1)

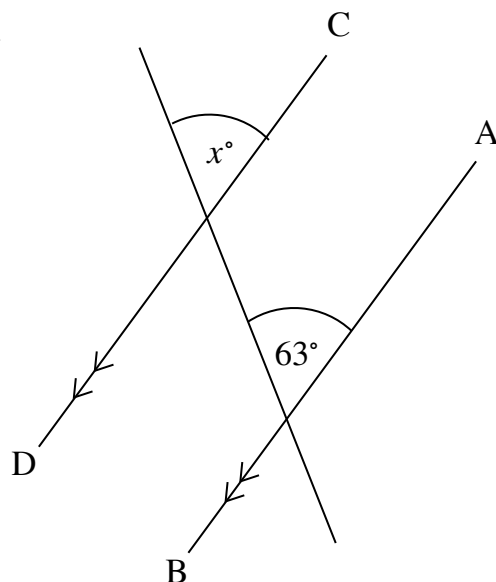
- (b) Give reason for your answer.

Cointerior angles are equal.

(1)

(Total for Question 2 is 2 marks)

3. AB and CD are parallel lines.



- (a) Write down the size of the angle marked x° .

63°
(1)

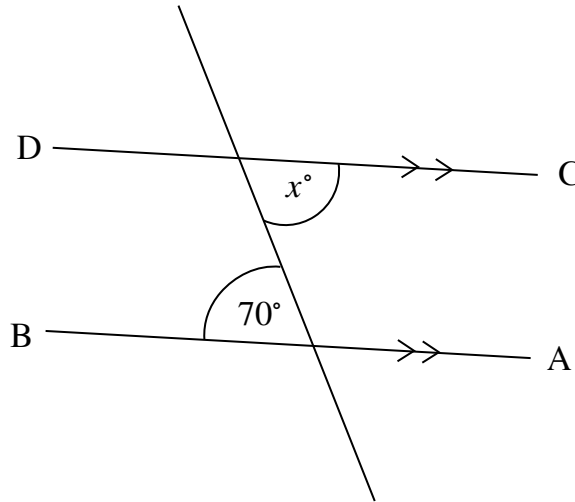
- (b) Give reason for your answer.

Corresponding angles are equal.

(1)

(Total for Question 3 is 2 marks)

4. AB and CD are parallel lines.



- (a) Write down the size of the angle marked x° .

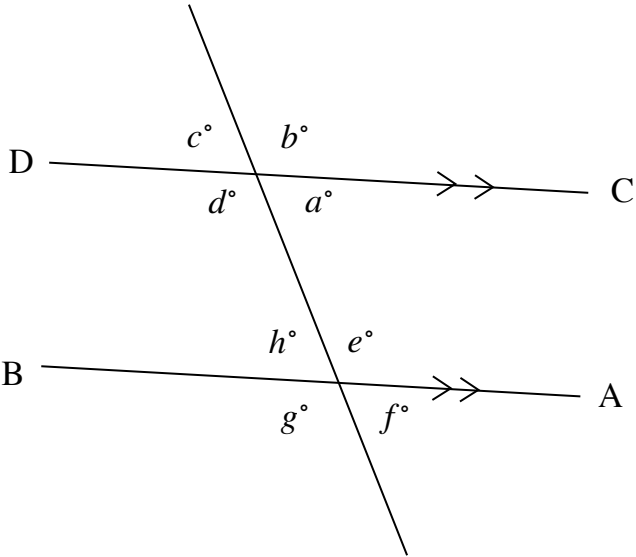
70 °
(1)

- (b) Give reason for your answer.

Alternate angles are equal.
(1)

(Total for Question 4 is 2 marks)

5. AB and CD are parallel lines.



(a) Which angle is alternate to angle d?

e
.....
(1)

(b) Which angle is corresponding to angle b?

g
.....
(1)

(c) Which angle is co-interior to angle a?

e
.....
(1)

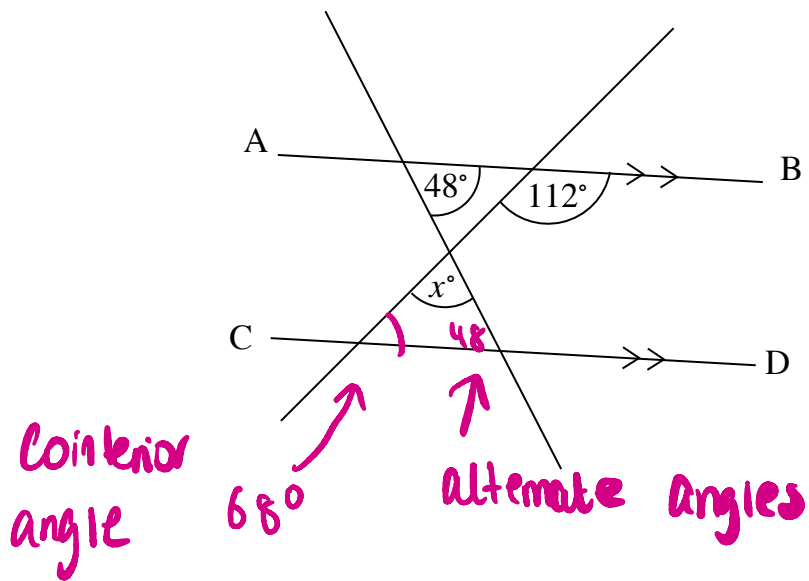
(d) Which angle is vertically opposite angle h?

f
.....
(1)

(e) Which angle is corresponding to angle g?

d
.....
(1)

6. AB and CD are parallel lines.



Work out the size of the angle marked x° .

Give reasons for your answer.

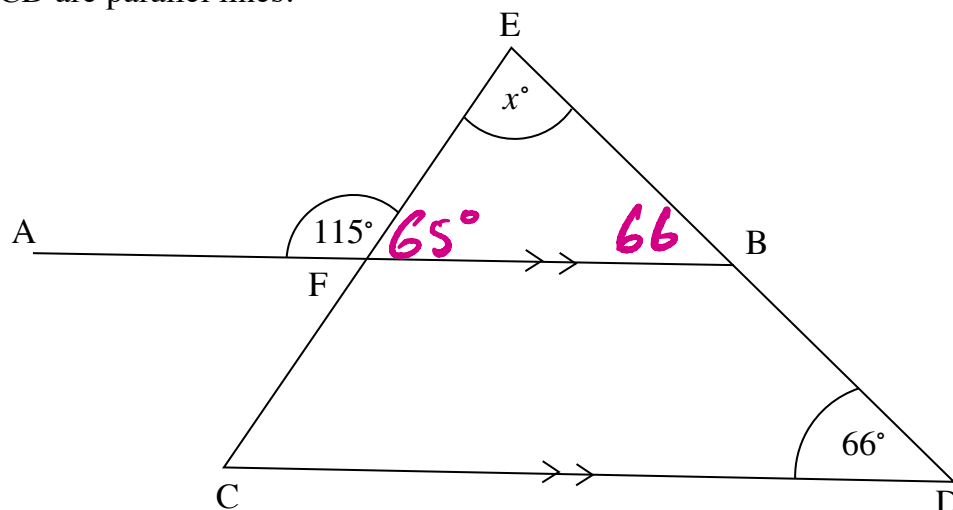
$$\begin{aligned} x &= 180 - 68 - 48 \\ &= 64^\circ \end{aligned}$$

angles in a triangle
Sum to 180° .

64°

(Total for Question 6 is 4 marks)

7. AB and CD are parallel lines.



Work out the size of the angle FEB.

Give reasons for your answer.

$$EFB = 65^\circ$$

angles straight
line sum to 180° .

$$EBA = 66^\circ$$

Corresponding angles
are equal.

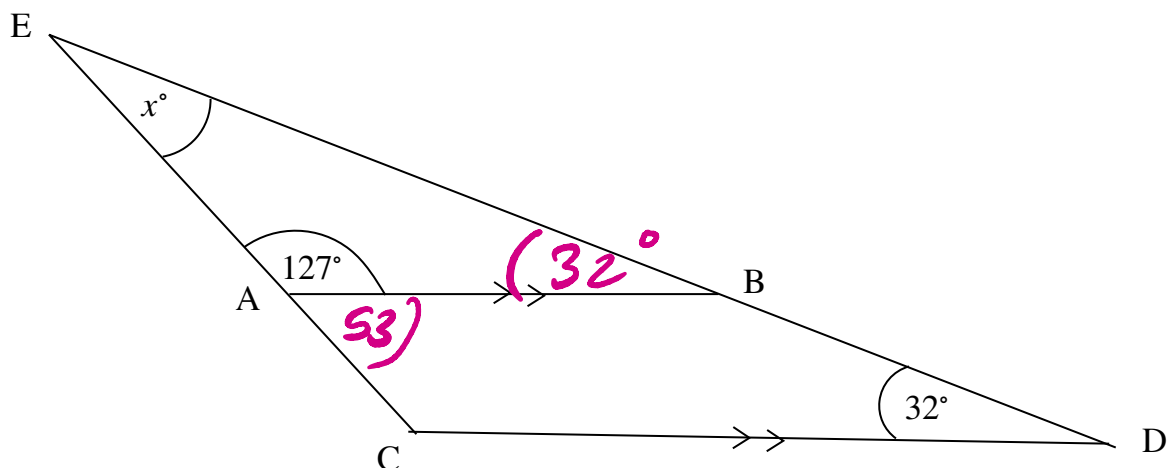
$$\begin{aligned} x &= 180 - 65 - 66 \\ &= 49 \end{aligned}$$

angles in
triangle sum
to 180° .

49°

(Total for Question 7 is 4 marks)

8. AB and CD are parallel lines.



Work out the size of the angle AEB.

Give reasons for your answer.

$$\angle BAC = 180 - 127 \\ = 53^\circ$$

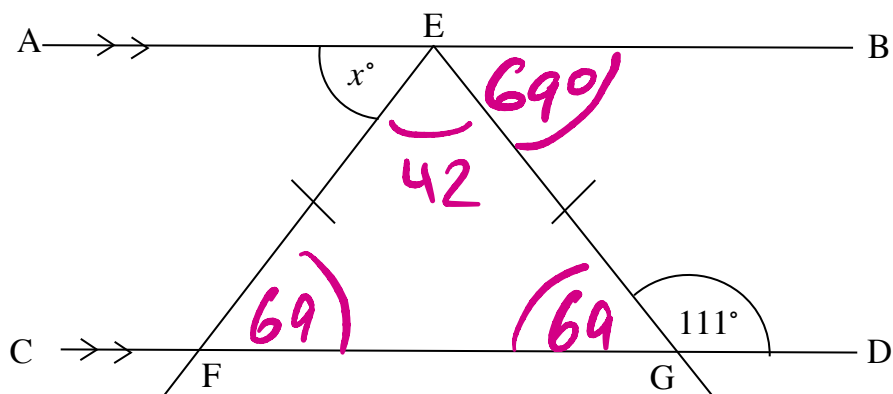
angles on straight
line sum to 180° .

$$x = 180 - 127 - 32 \\ = 21$$

21 °

(Total for Question 8 is 4 marks)

9. AB and CD are parallel lines.



Work out the size of the angle AEF.

Give reasons for your answer.

$$\angle EGF = 180 - 111 = 69^\circ \quad \text{- angles on straight line}$$

$$\angle EFG = 69 \quad \text{- isosceles triangle.}$$

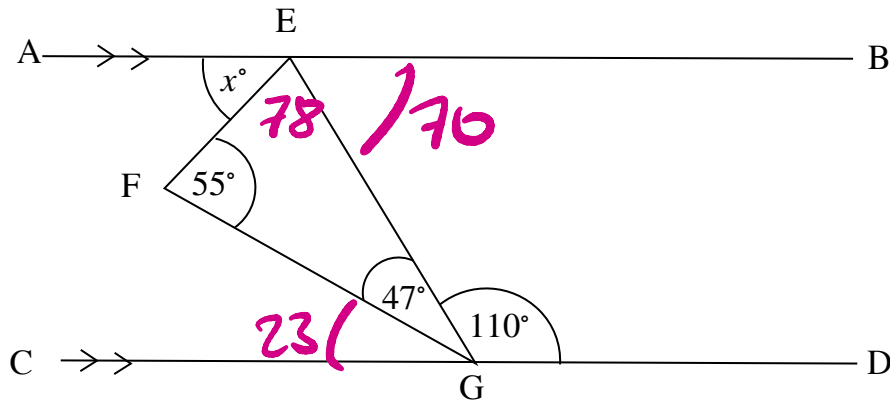
$$\begin{aligned} \angle FEG &= 180 - 69 - 69 \quad \text{- angles in triangle sum to } 180^\circ \\ &= 42^\circ \end{aligned}$$

$$\angle BEG = 69^\circ \quad \text{- alternate to } \angle EGD$$

$$\begin{aligned} x &= 180 - 42 - 69 \\ &= 69^\circ \end{aligned}$$

69°

10. AB and CD are parallel lines.



Work out the size of the angle AEF.

Give reasons for your answer.

$$\angle FEG = 180 - 55 - 47 = 78$$

↳ angles in triangle = 180°

$$\angle FGC = 180 - 47 - 110 = 23^\circ$$

$$\angle BEG = 23 + 47 = 70^\circ$$

↳ alternate angles.

$$x = 180 - 70 - 78 = 32$$

↳ angles on straight line = 180°

32°

(Total for Question 10 is 4 marks)