JP Maths Revision

Attempt the paper before watching the solutions!

https://www.youtube.com/@JPMathsRevision

FOUNDATION / HIGHER TIER

Angles in Polygons

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

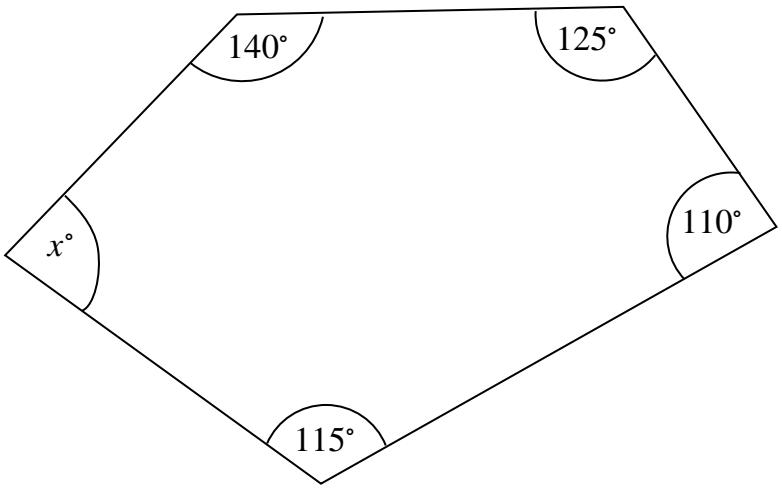
- The marks for **each** question are shown in brackets– *use this as a guide as to how much time to spend on each question.*

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. Calculate the size of the angle marked x.



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(Total for Question 1 is 3 marks)

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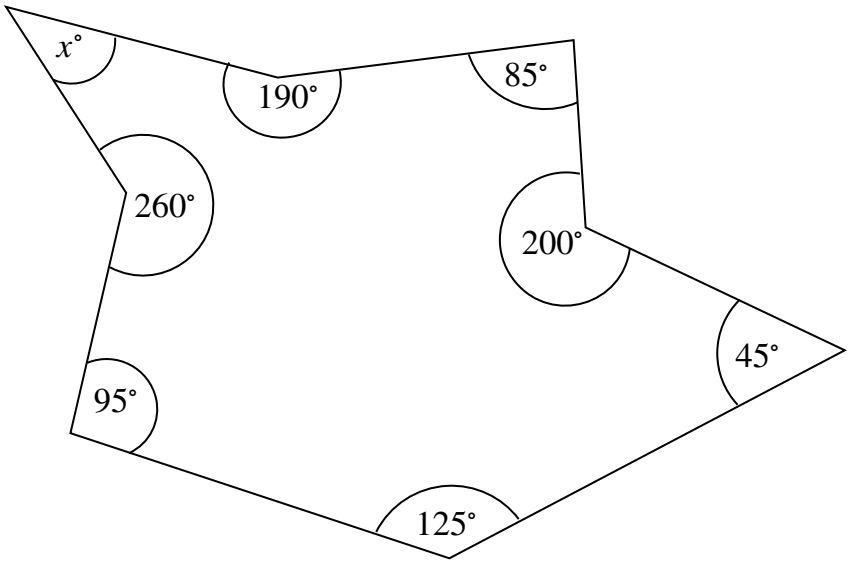
2 Calculate the size of the angle marked x.



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(Total for Question 2 is 3 marks)

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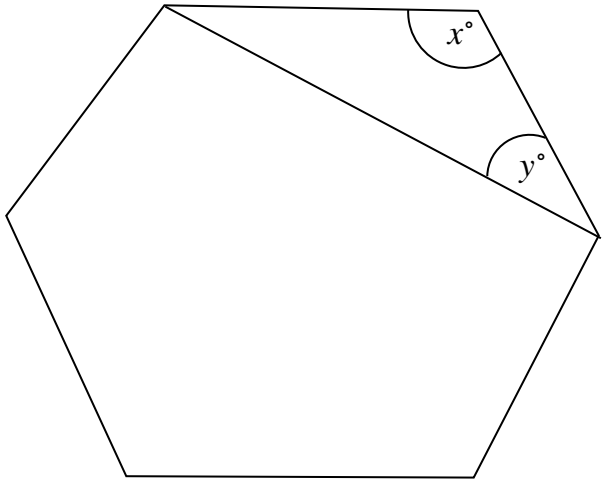
3. Below is a regular hexagon.



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

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(2)

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

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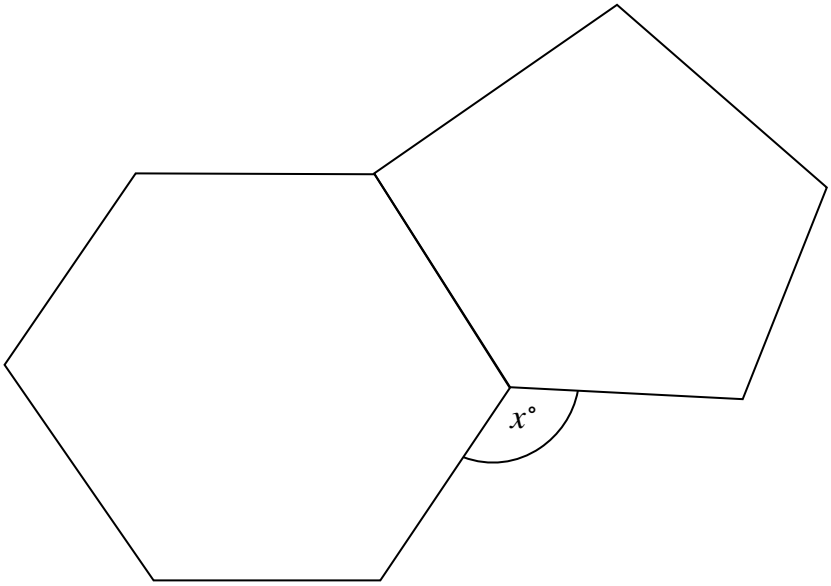
(2)

(Total for Question 3 is 4 marks)

4. Below is a regular hexagon and a regular pentagon.



Work out the size of the angle marked $x°$

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(Total for Question 4 is 4 marks)

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5. A regular polygon has 15 sides.
Work out the size of each interior angle.

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(Total for Question 5 is 3 marks)

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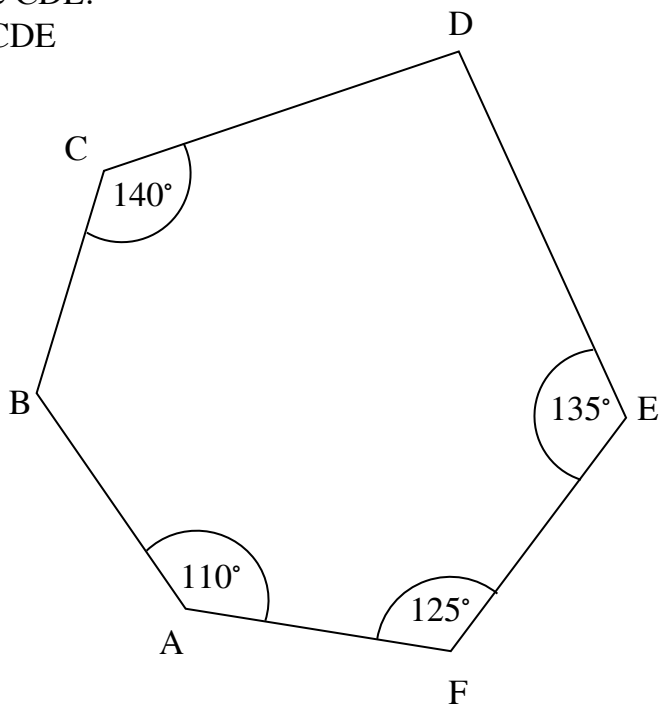
6. Here is a hexagon ABCDEF.
Angle ABC = 2 x angle CDE.
Find the size of angle CDE



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(Total for Question 6 is 4 marks)

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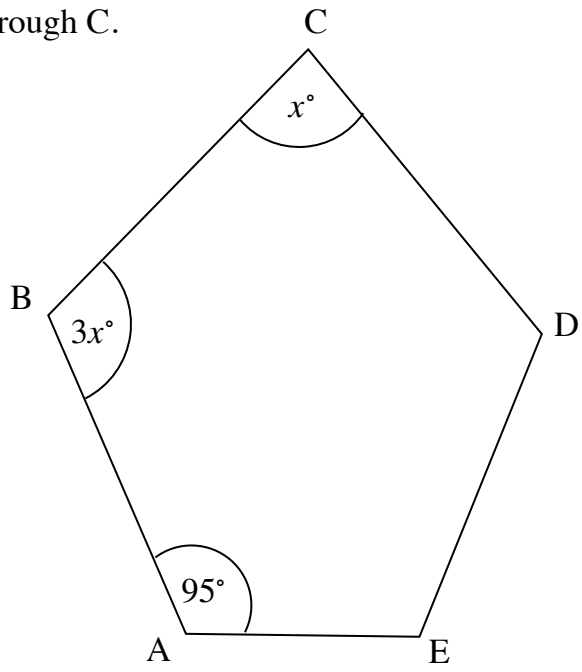
7. Below is a pentagon ABCDE with a line of symmetry through C.

Find the size of angle BCD.



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(Total for Question 7 is 4 marks)

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8. Each exterior angle of a regular polygon is 24°.
Work out how many sides the polygon has.

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(Total for Question 8 is 2 marks)

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9. Each interior angle of a regular polygon is 150°.
Work out how many sides the polygon has.

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(Total for Question 9 is 2 marks)

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10. A regular polygon has 18 sides.
Work out the size of each exterior angle.

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(Total for Question 10 is 2 marks)

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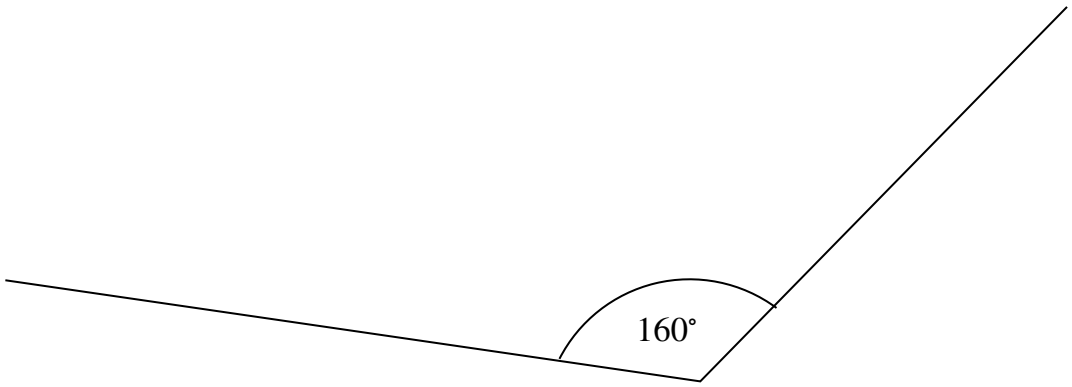
11. Shown is an interior angle from a regular polygon.



Calculate the number of sides the polygon has.

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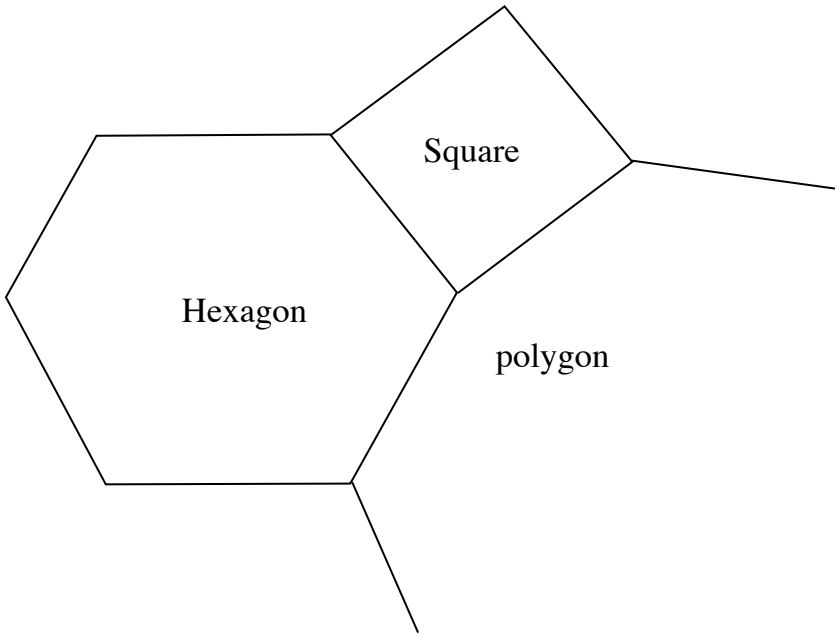
(Total for Question 11 is 2 marks)

12. Shown below is part of a regular polygon, a regular hexagon and a square meeting at a point.



Work out how many sides the regular polygon has.

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(Total for Question 12 is 4 marks)

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13. The exterior angle of a regular polygon is three times smaller than the exterior angle of a regular hexagon. Work out how many sides the polygon has.

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(Total for Question 13 is 4 marks)

14. The interior angle of a regular polygon is 5 times its exterior angle.

Work out how many sides the polygon has.

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(Total for Question 14 is 4 marks)