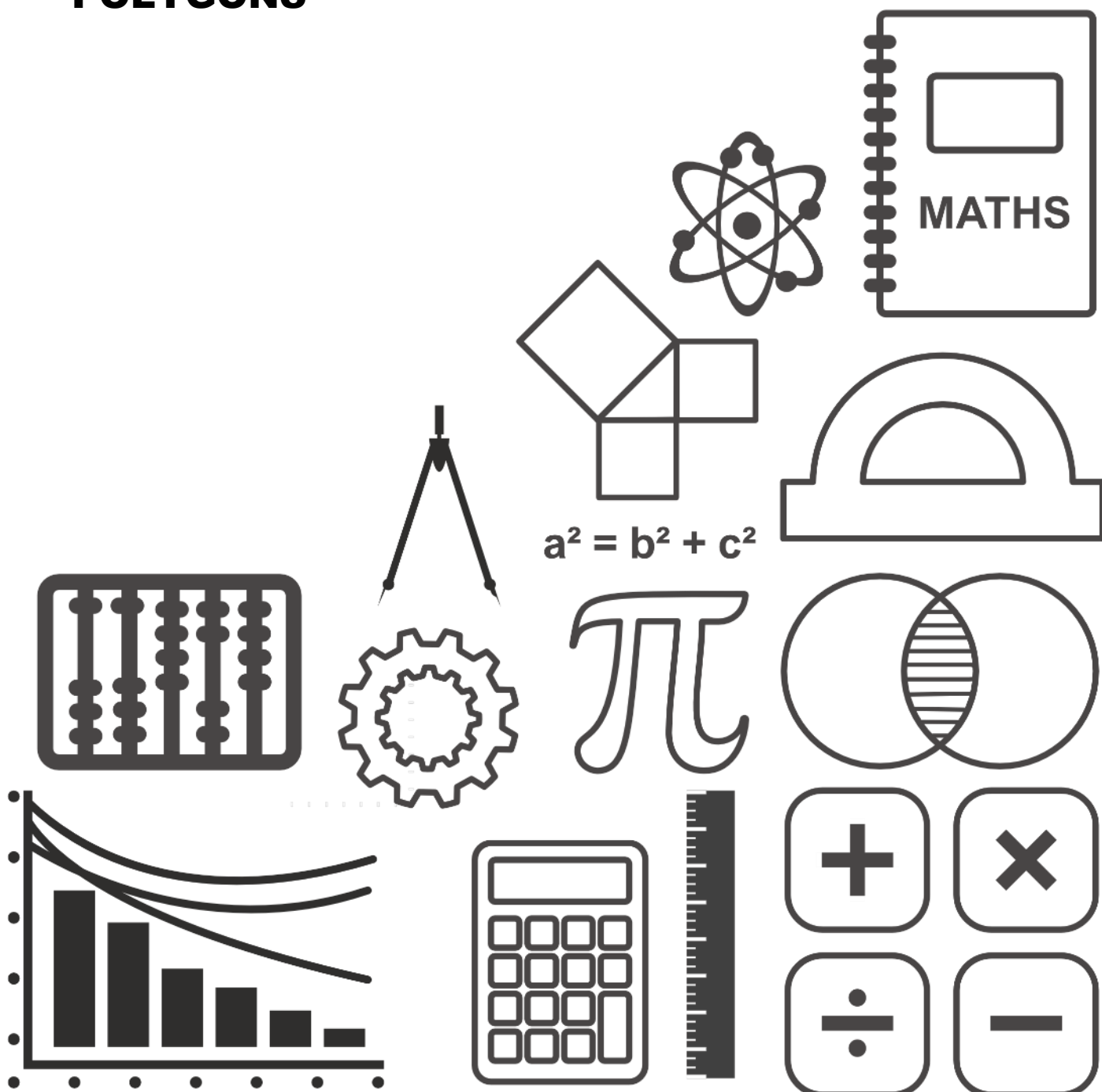


MATHS DIY

GCSE TOPIC BOOKLET POLYGONS



1. Calculate the size of **each** interior angle of a regular eight-sided polygon.

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.....

[2]

2. Calculate the size of each of the exterior angles of a regular pentagon.

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.....

.....

[3]

3. The diagram shows a regular 8-sided polygon.

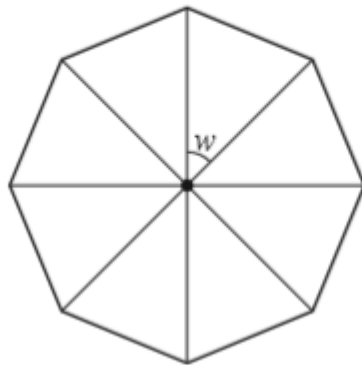


Diagram not drawn to scale.

Calculate the size of the angle marked *w* in the diagram.

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.....

[2]

4. A six sided polygon is to be drawn using a computer program. The designer has stated that three of the internal angles should be 140° each and the remaining three angles should all be acute angles. Explain whether or not this design is possible. Show your working and give a reason for your answer.

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[6]

5. Find the size of each of the angles marked r and t .

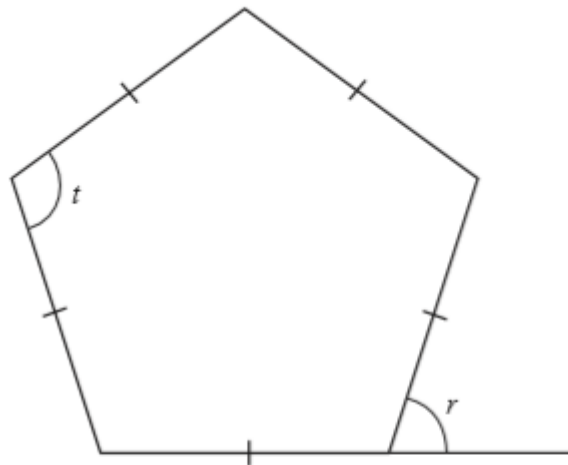


Diagram is not drawn to scale.

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.....

.....

$r =$

$t =$

[3]

6. Explain clearly why a regular polygon cannot have exterior angles of 80° .

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[2]

7. The diagram below shows a regular octagon.

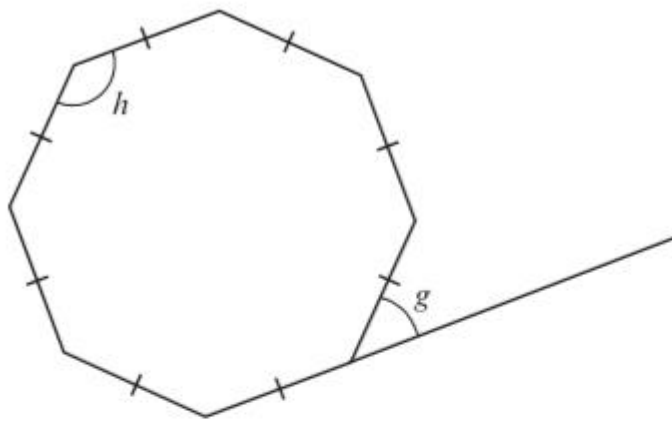


Diagram not drawn to scale.

Find the size of each of the angles marked g and h .

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.....

.....

$g = \dots\dots\dots^\circ$

$h = \dots\dots\dots^\circ$

[3]

8. Two exterior angles of a triangle are 150° and 110° . Calculate the size of the third exterior angle of the triangle.

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.....

[3]

9. The diagram shows a regular hexagon. Showing all your working, calculate the size of the angle marked x .

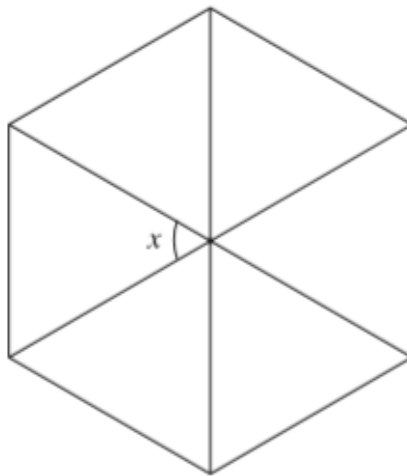


Diagram not drawn to scale.

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[2]

10. Calculate the size of the interior angle of a regular 10 sided polygon.

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[3]

11. The diagram shows a regular 8 sided polygon.

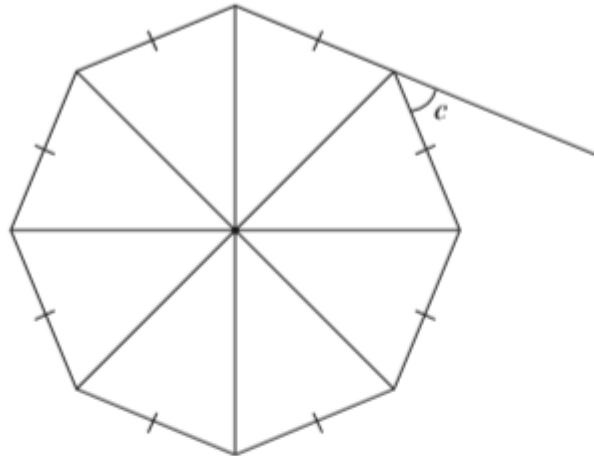


Diagram not drawn to scale

Showing all your working, calculate the size of the angle marked c in the diagram.

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[2]

12. The diagram shows a regular hexagon.

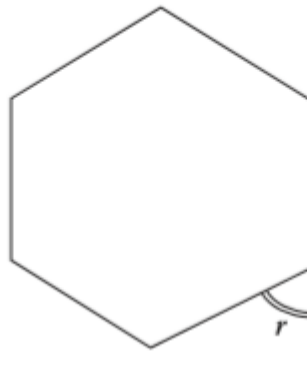


Diagram not drawn to scale

Calculate the size of the angle marked r .

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.....

.....

$r = \text{.....}^\circ$

[2]