

Using Angle Facts

Lines

Vertically Opposite Angles are equal
 Angles on a straight line add to 180°
 Angles at a point add up to 360°

Triangles & Quadrilaterals

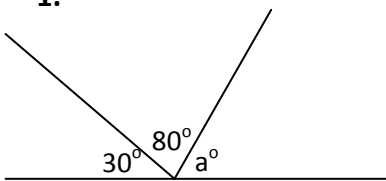
Angles in a triangle add up to 180°
 Base angles of an isosceles triangle are equal
 Angles in an equilateral triangle are equal
 Angles in a quadrilateral add up to 360°

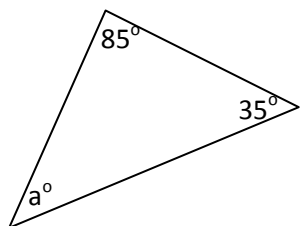
Parallel lines

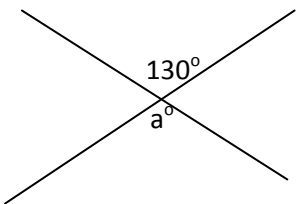
Alternate angles are equal
 Corresponding angles are equal
 Interior angles add to 180°

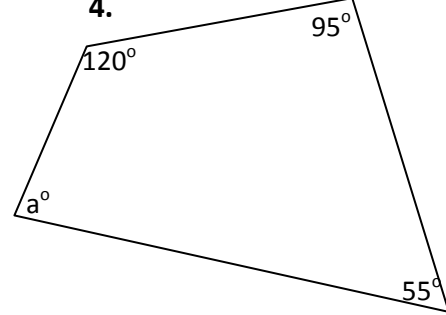
One or two of the reasons above must be quoted in **all** examinations involving angle problems when the problem requires an explanation.

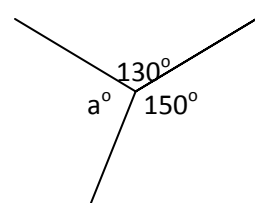
For the following problems, find the missing angles and give a reason to go with each angle (choose it from the list above). Please note – calculations ARE NOT reasons.

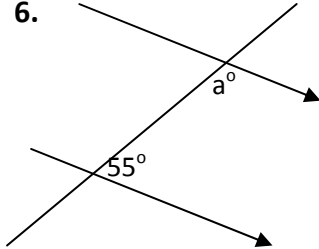
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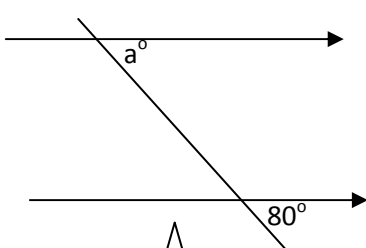
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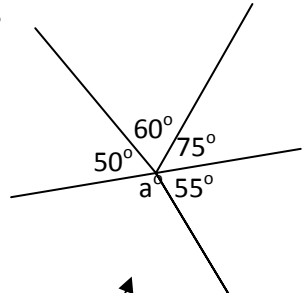
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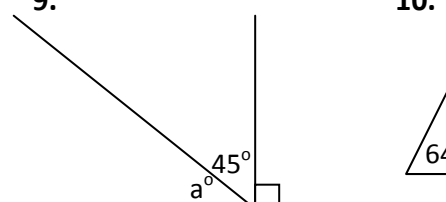
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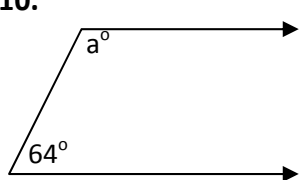
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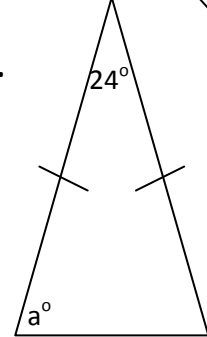
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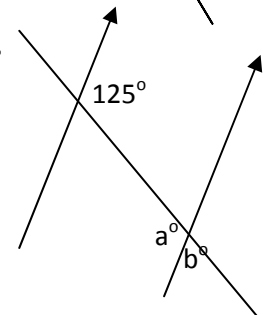
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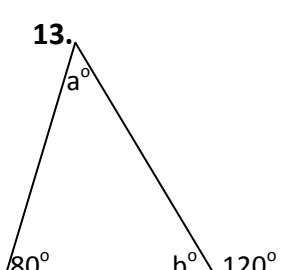
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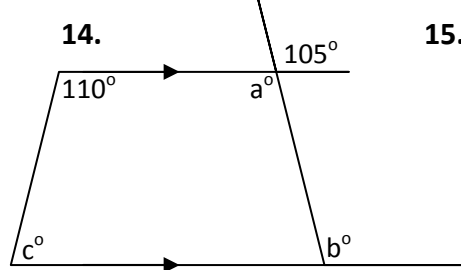
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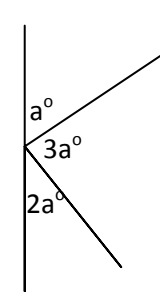
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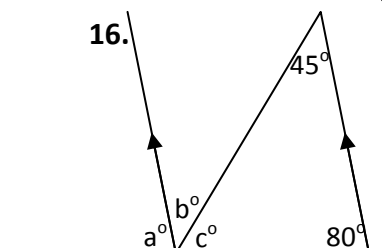
11. 

12. 

13. 

14. 

15. 

16. 

17. How does the diagram shown in question 16 prove the fact that all the angles in a triangle add up to 180° . Copy the following diagram and try to explain mathematically why.

