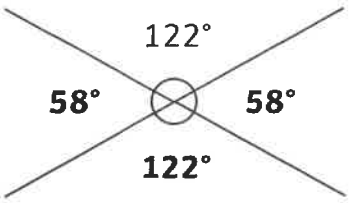
Angles at a Point **Answers**

I can calculate angles at a point.

Calculate and label the size of all the angles where each pair of lines intersect.

1.



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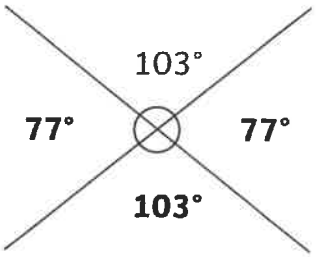

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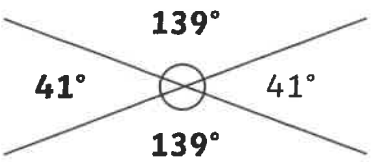

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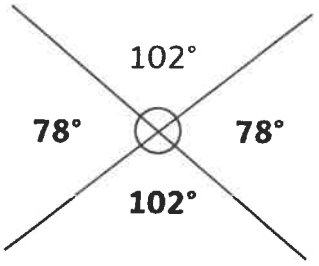

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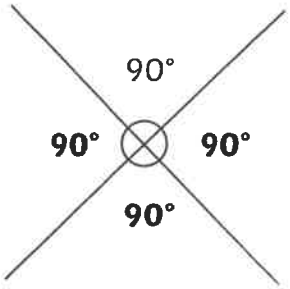

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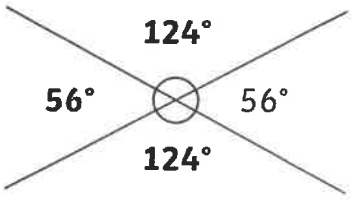

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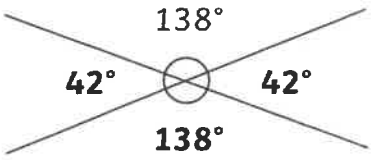

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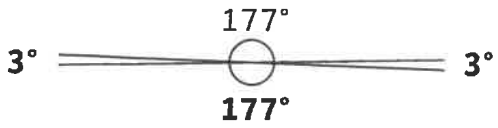

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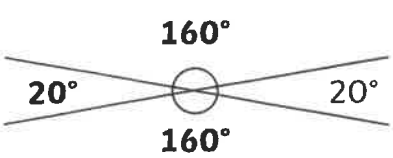

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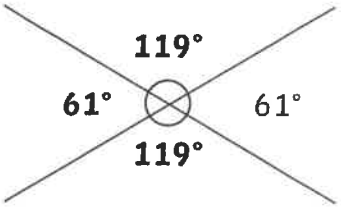
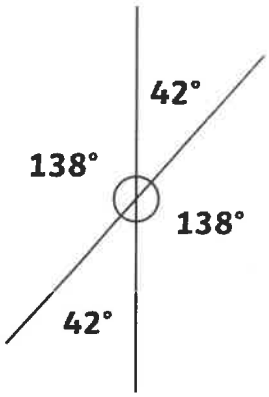
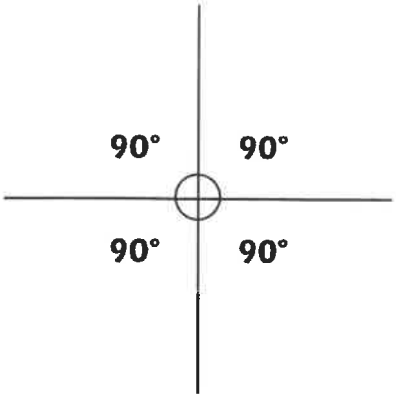


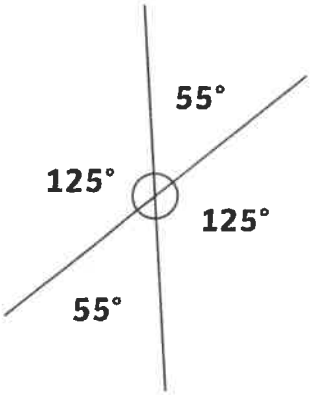
Complete the following sentences to explain how to calculate the angles where 2 lines intersect.

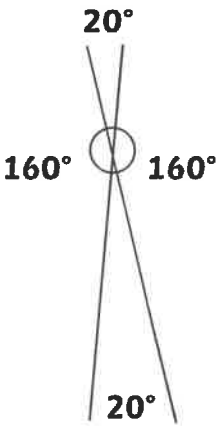
1. When two lines intersect the total of two adjacent angles is **180°**.
2. If one angle is known, the other can be found by **subtracting the known angle from 180°**.
3. When two lines intersect the total of all the angles **360°**.
4. The angles opposite the point are **equal**.

Here are 4 pairs of lines. Estimate the size of each angle, using what you know about angles at a point.







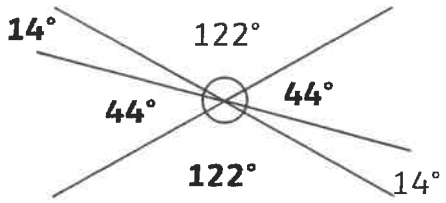


Angles at a Point **Answers**

I can calculate angles at a point.

Calculate and label the size of all the angles where each pair of lines intersect.

1.



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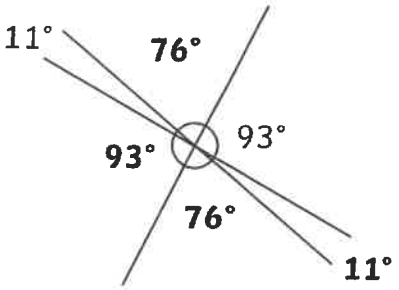

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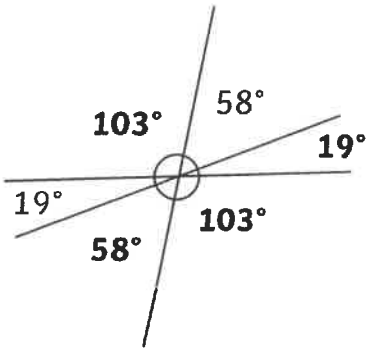

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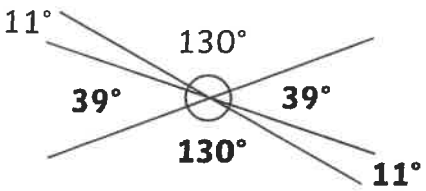

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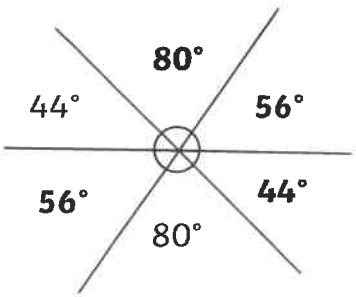

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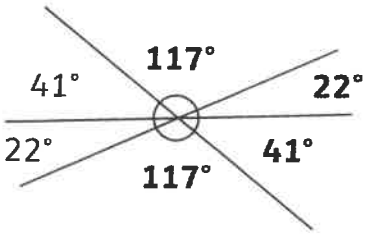

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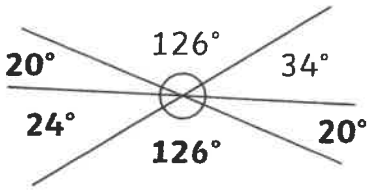

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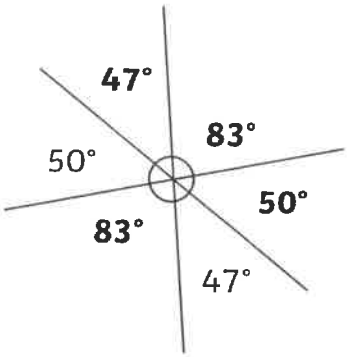

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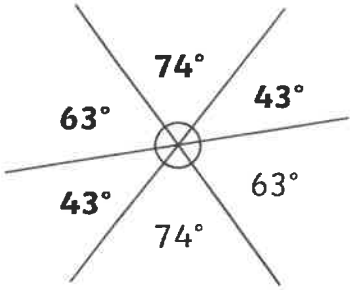

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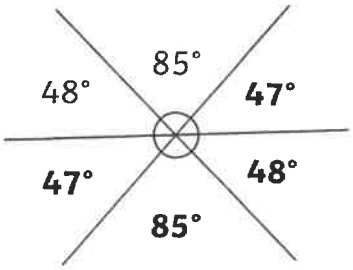
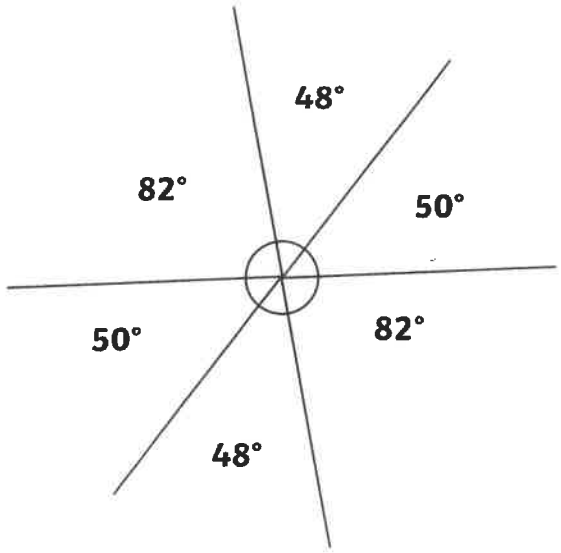


Write an explanation of how to find the unknown angles where 3 lines intersect and 2 angles that are not opposite are known.

When 3 lines intersect at a point there are 6 angles. Opposite angles are equal so there will usually be 3 different angles. It is possible for 2 pairs (4 angles) to be equal, or all to be equal. 3 adjacent angles add up to 180° and all the angles add up to 360°. Where 2 angles are given, the other angle is the difference between the total of the known angles and 180°. If the 2 given angles are opposite, and therefore equal, the other angles cannot be calculated.

Draw 2 sets of 3 lines intersecting at a point and estimate the size of each angle, using what you know about angles at a point.



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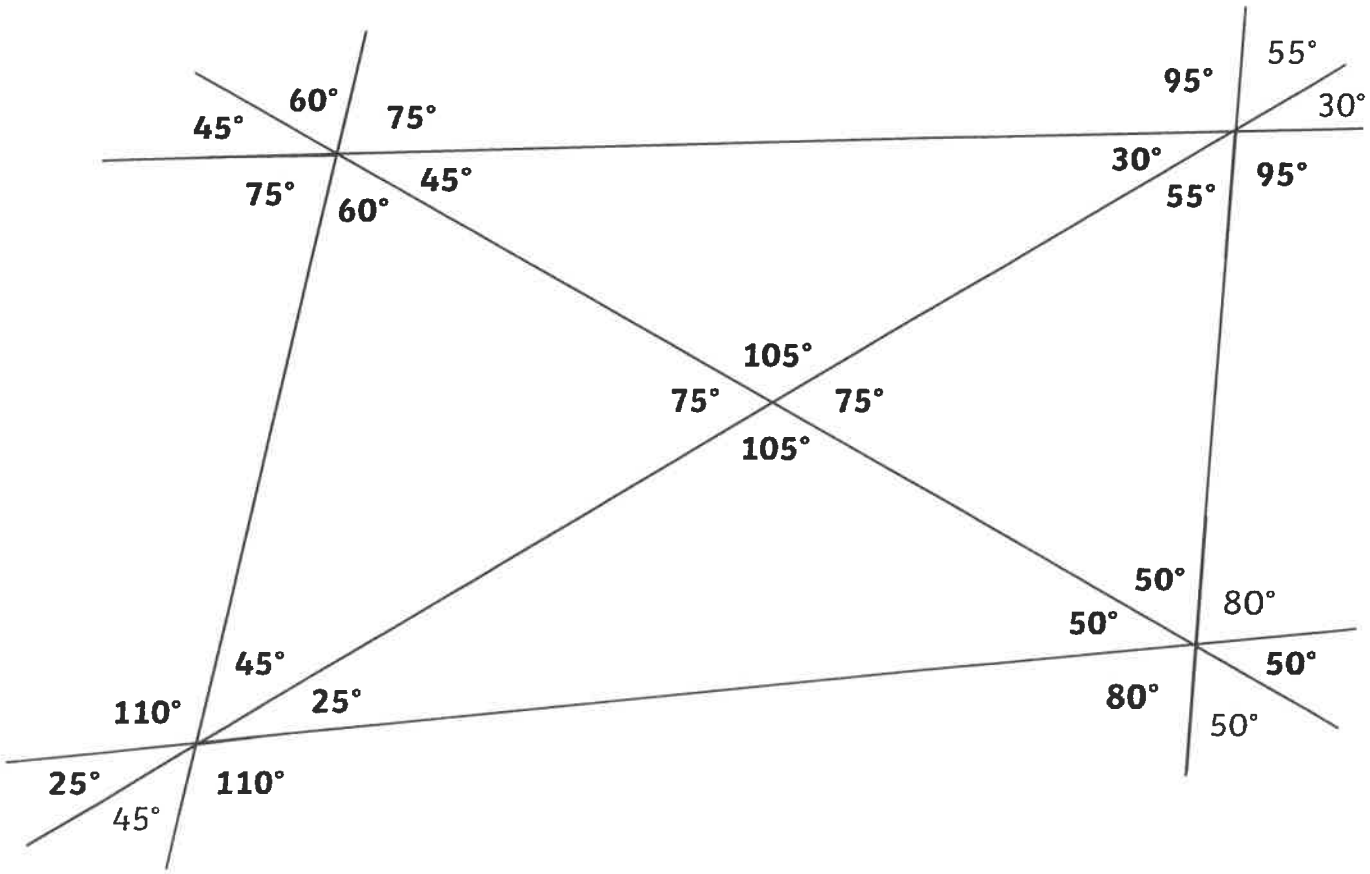
Angles at a Point **Answers**

I can calculate angles at a point.

Here are 6 lines. There are 4 points where 3 lines intersect and one point where 2 lines intersect. Using the five given angles, calculate and label the size of all the other angles in the diagram.