Hello again Year 5,

I have seen on class pages that you have also been working on angles with your class, as well as with me. I hope my videos have been helpful to you.

Today we are going to look at angles on a straight line and angles around a point.

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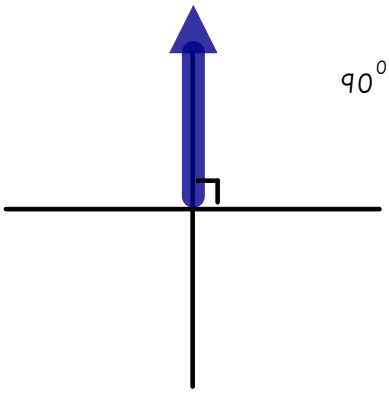

In our earlier work we looked at turning a full circle/full turn.

We looked at quarter turns and half turns.

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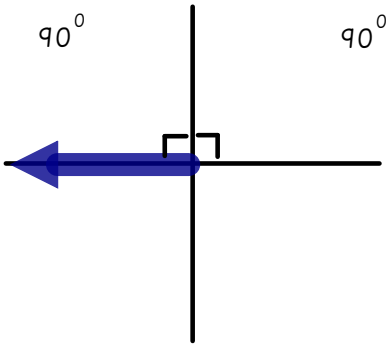

Hopefully, from this you can see that a straight line angle is 180°

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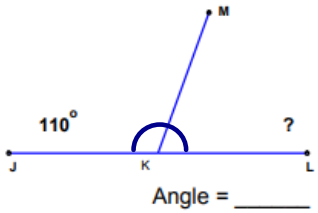
So on these questions, we can use our knowledge that angles on a straight line equal 180° in order to find missing angles on an image - without the use of a protractor.



The two angles together make a straight line, which we know is 180°

If one of the angles is 110°

The missing angle must be the difference between 110° and 180°

We find the difference between two numbers by subtracting one from the other

180 - 110 = 70, so the missing angle is 70°

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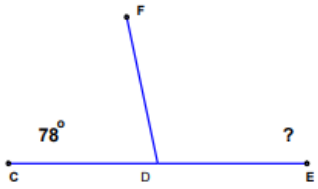
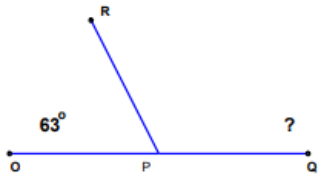
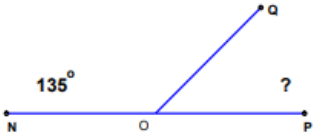
Here are some more to try...



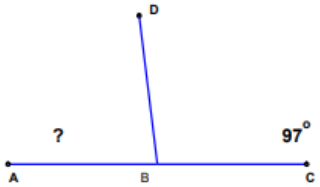
Angle = _____



Angle = _____



Angle = _____



Angle = _____

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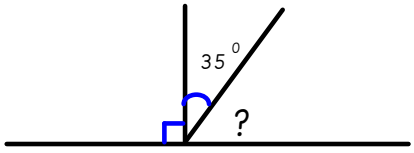

How do you think you work out the missing angle now?

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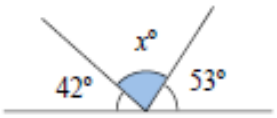
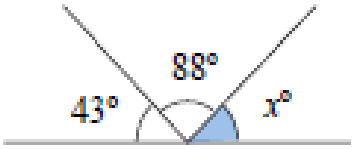
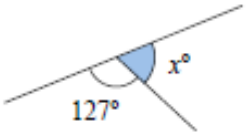
Can you find the value of x in each of these examples?







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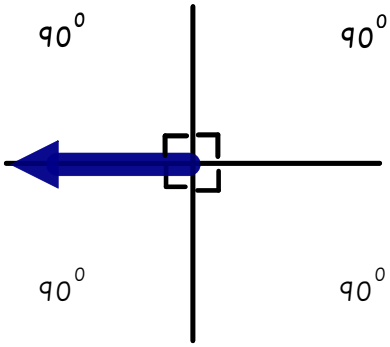

Now let us think about a full circle or a full turn.

That would be the same as 4 quarter turns.

4 lots of $90^{\circ} = 360^{\circ}$

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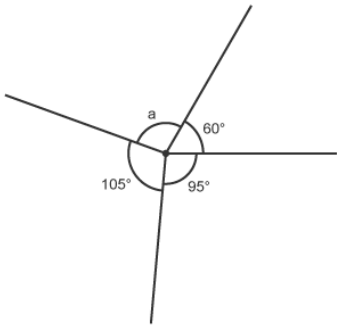
Calculate angle a.



As we know the angles in a full circle or a full turn would = 360°

we can work out 'a' by first adding up the other angles we have been given, then finding the difference between that answer and 360°

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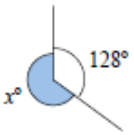
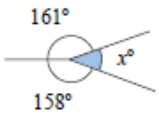
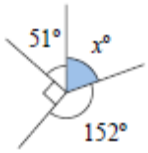
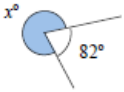
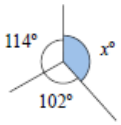
Can you find the value of x in these examples?











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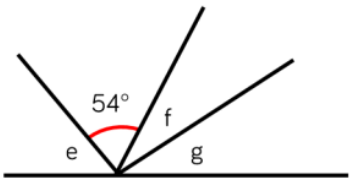
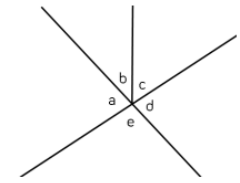


- The total of angle f and g are the same as angle e
- Angle e is 9° more than the size of the given angle.
- Angle f is 11° more than angle g

Calculate the size of the angles.

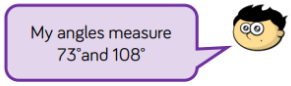


$a + b + c + d + e = 360°$

$d + e = 180°$

Write other sentences about this picture.

Jack is measuring two angles on a straight line.



Explain why at least one of Jack's angles must be wrong.

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Answers

$e = 63°$

$f = 37°$

$g = 26°$

Various answers e.g.

$a + b + c = e + d$

$360° - e - d = 180°$

etc.

Jun 26-12:05