

Euclid's Elements

Book I

If Euclid did not kindle your youthful enthusiasm, you were not born to be a scientific thinker.

Albert Einstein

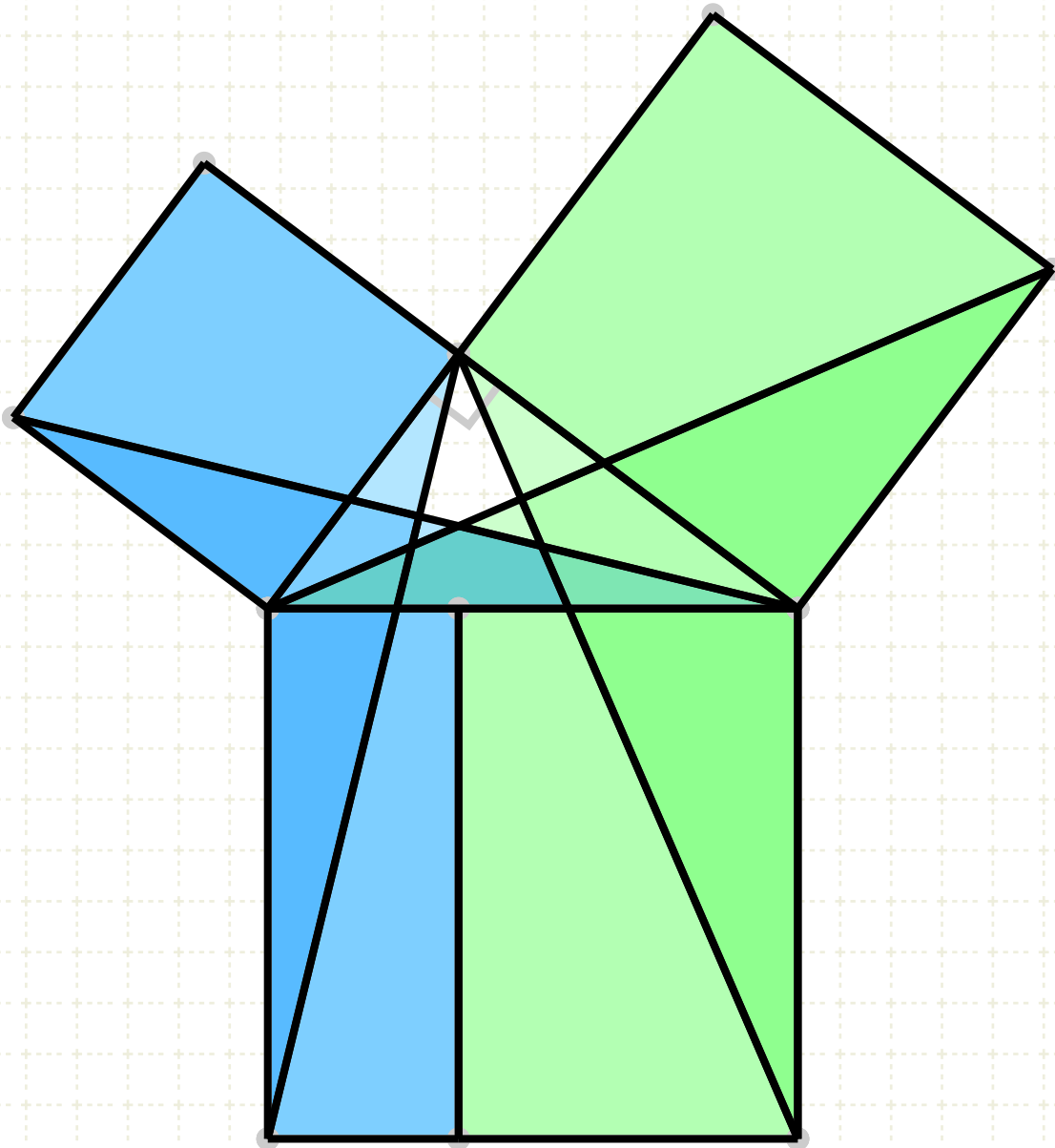


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Proposition 1 of Book I

To construct an equilateral triangle on a given finite straight line.



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To construct an equilateral triangle on a given finite straight line.

Construction:

Start with line segment AB



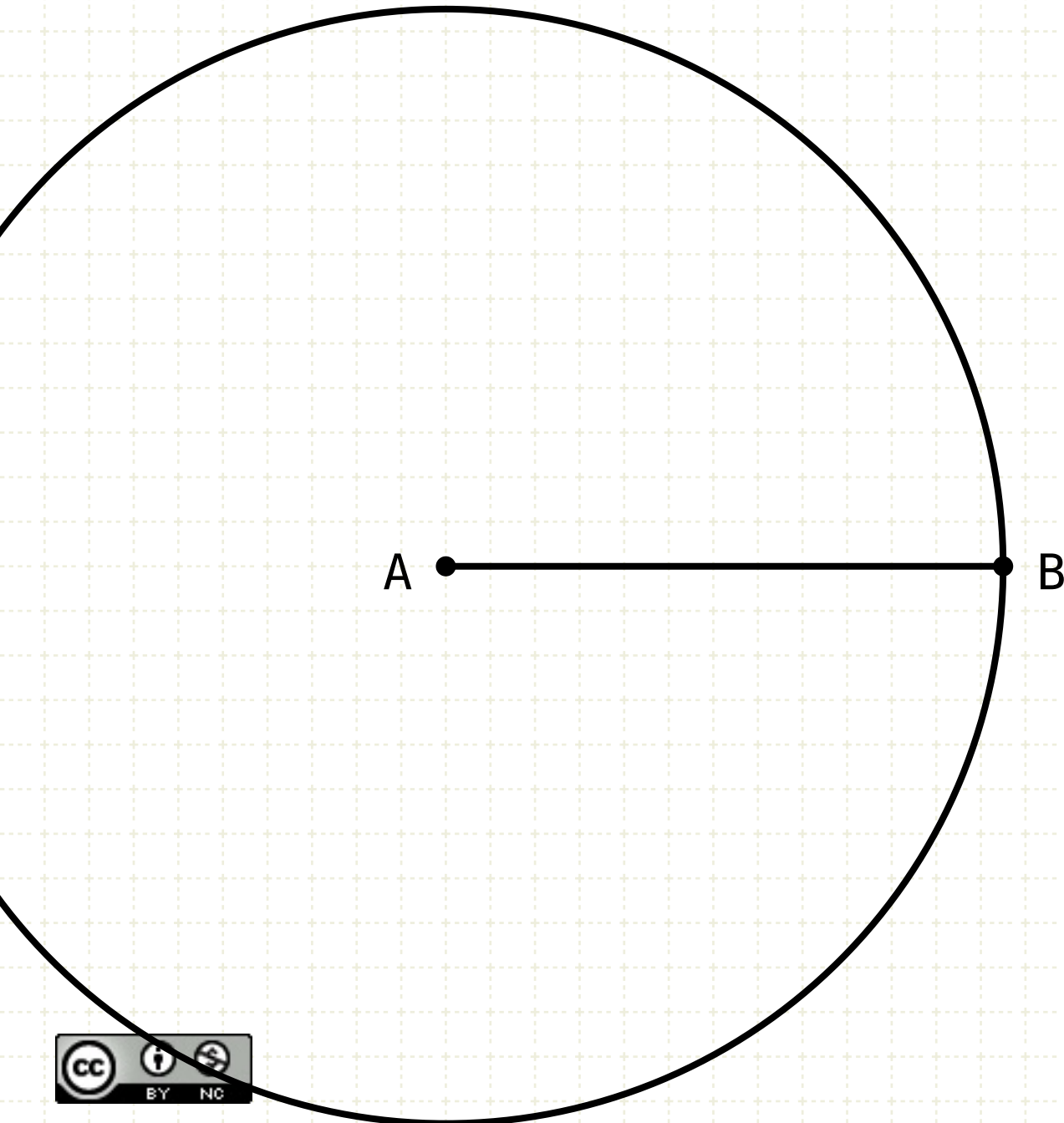
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To construct an equilateral triangle on a given finite straight line.

Construction:

Start with line segment AB

Create a circle with center A and radius AB



Proposition 1 of Book I

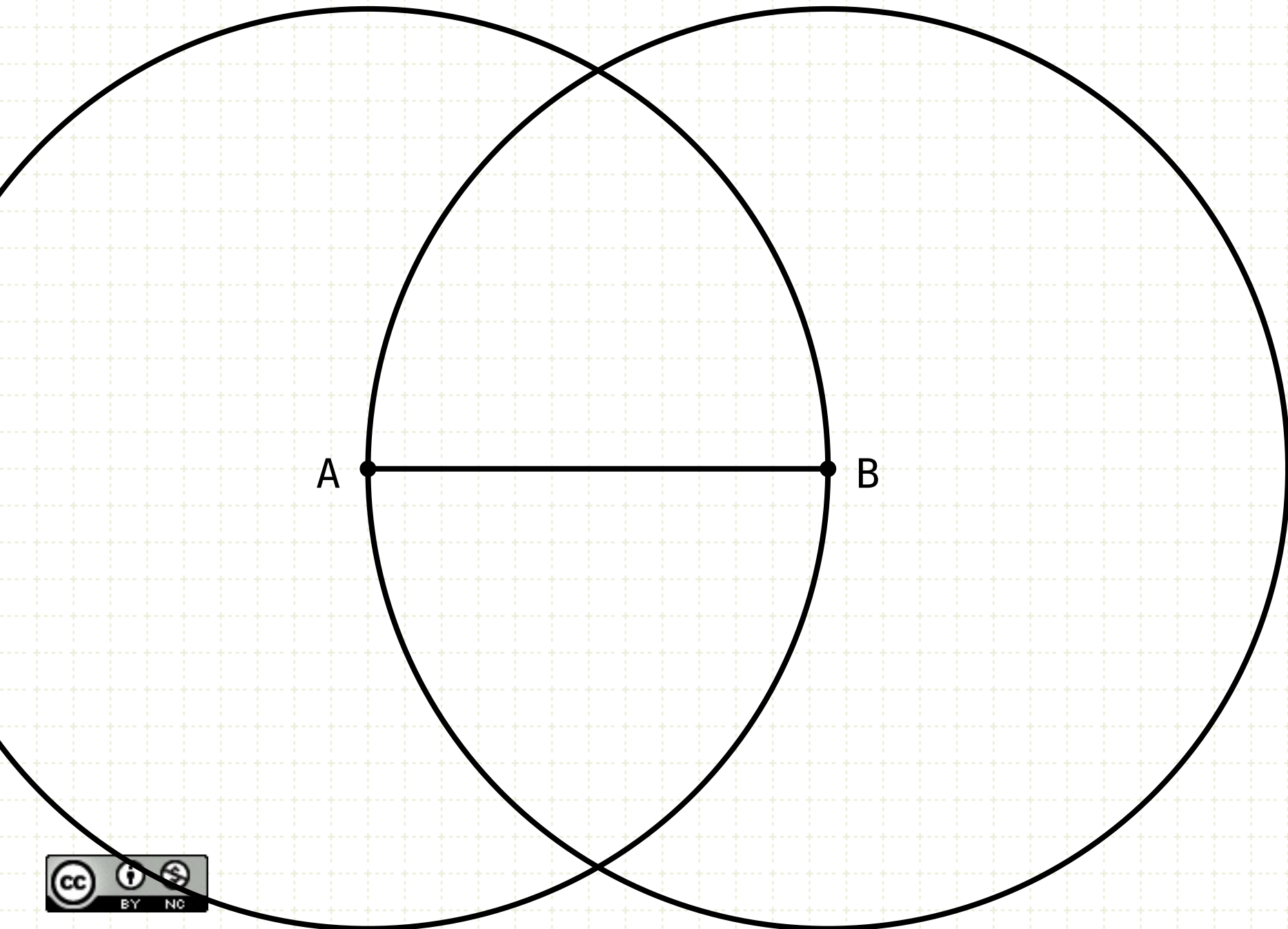
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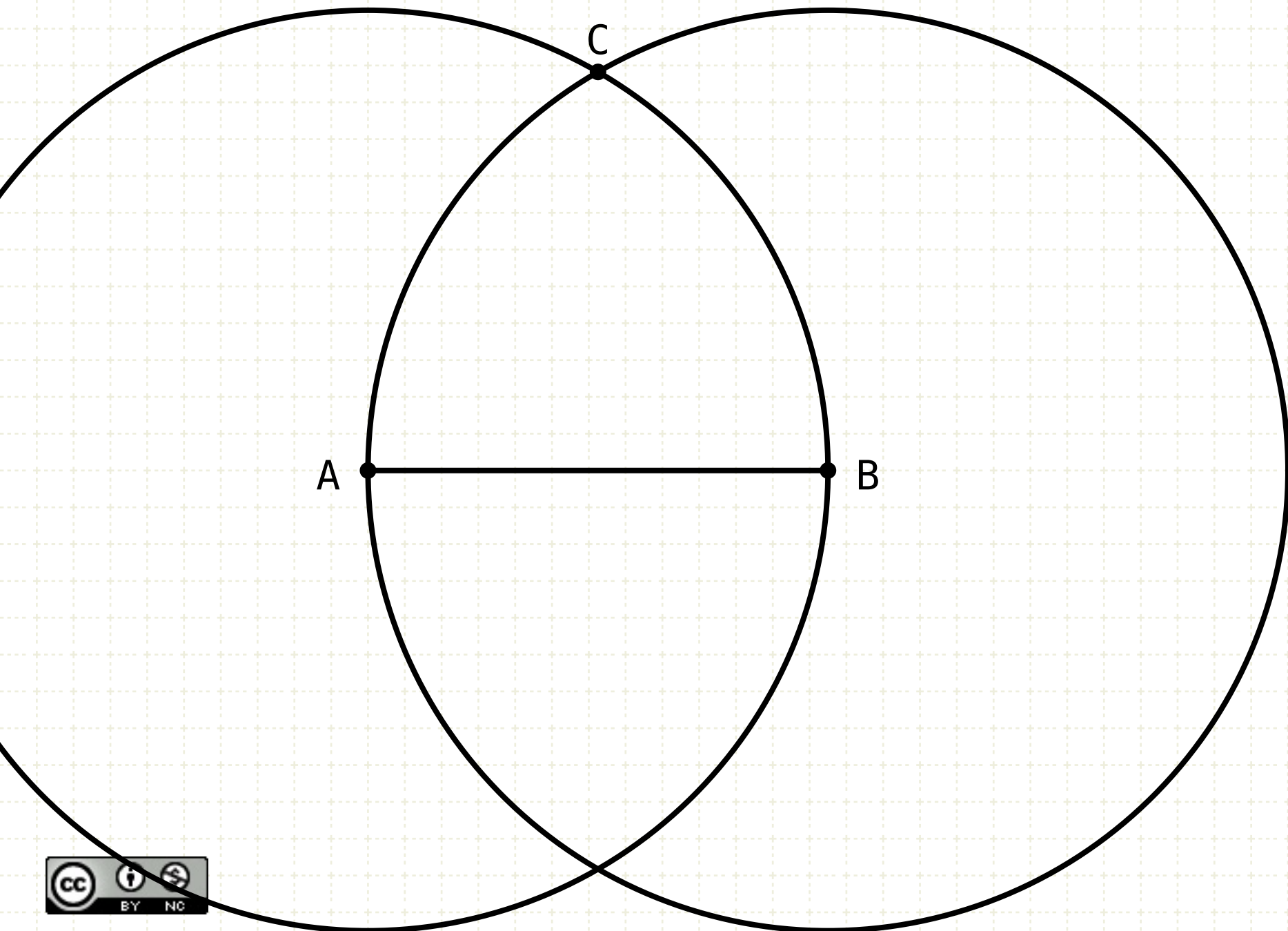
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Label the intersection point C



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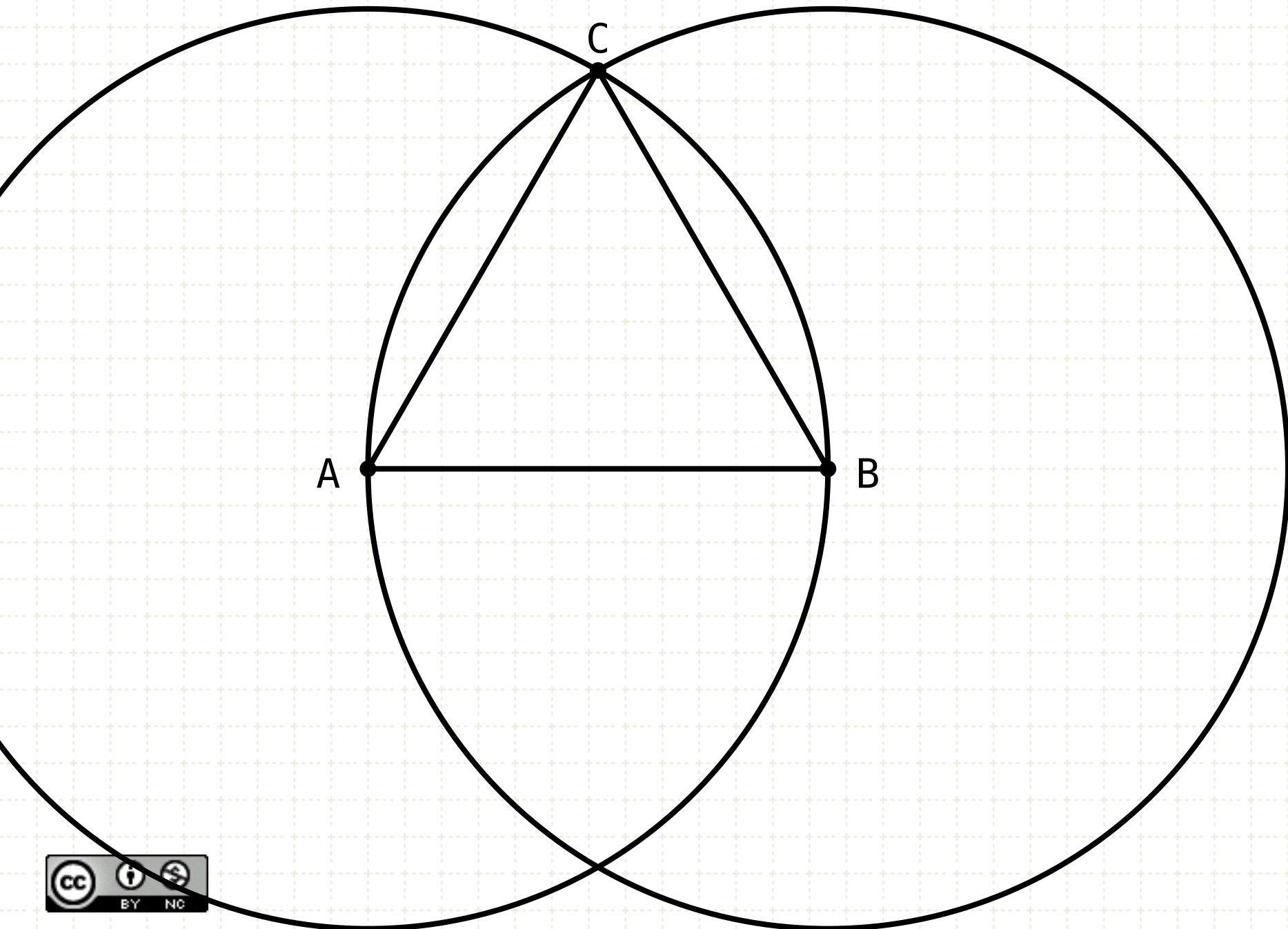
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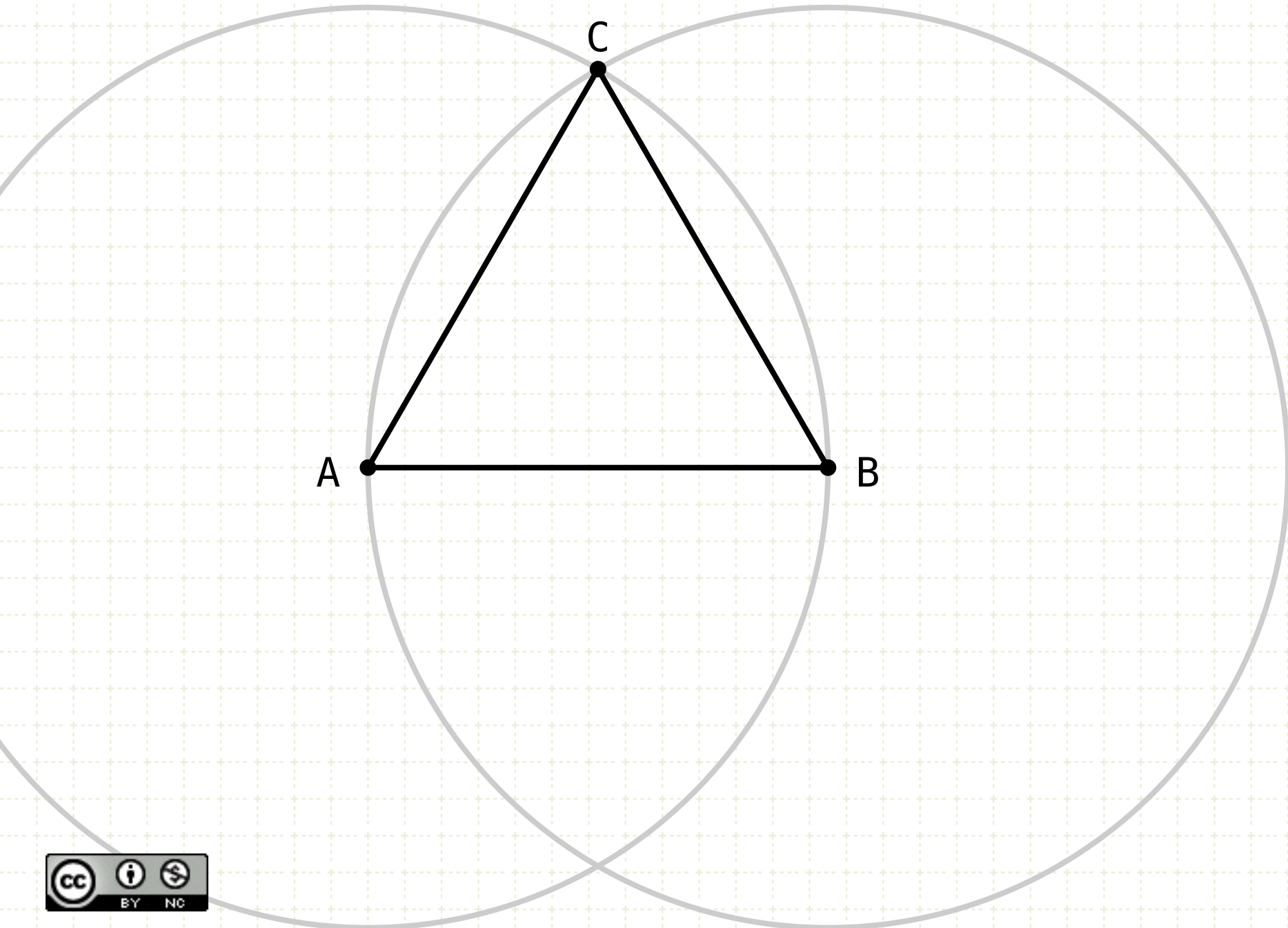
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Triangle ABC is an equilateral triangle



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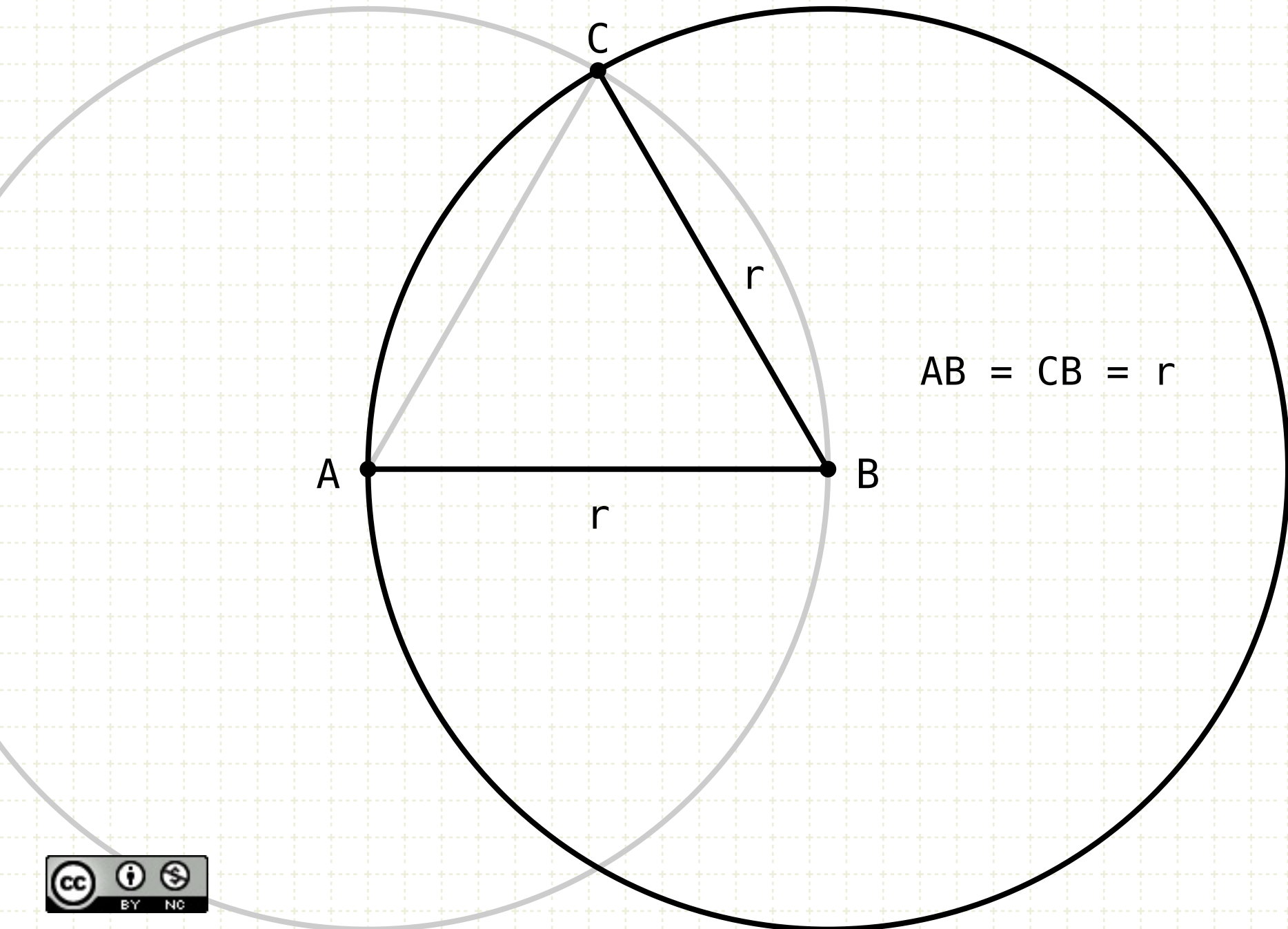
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Proof:

AB and CB are radii of the same circle - hence they are equal



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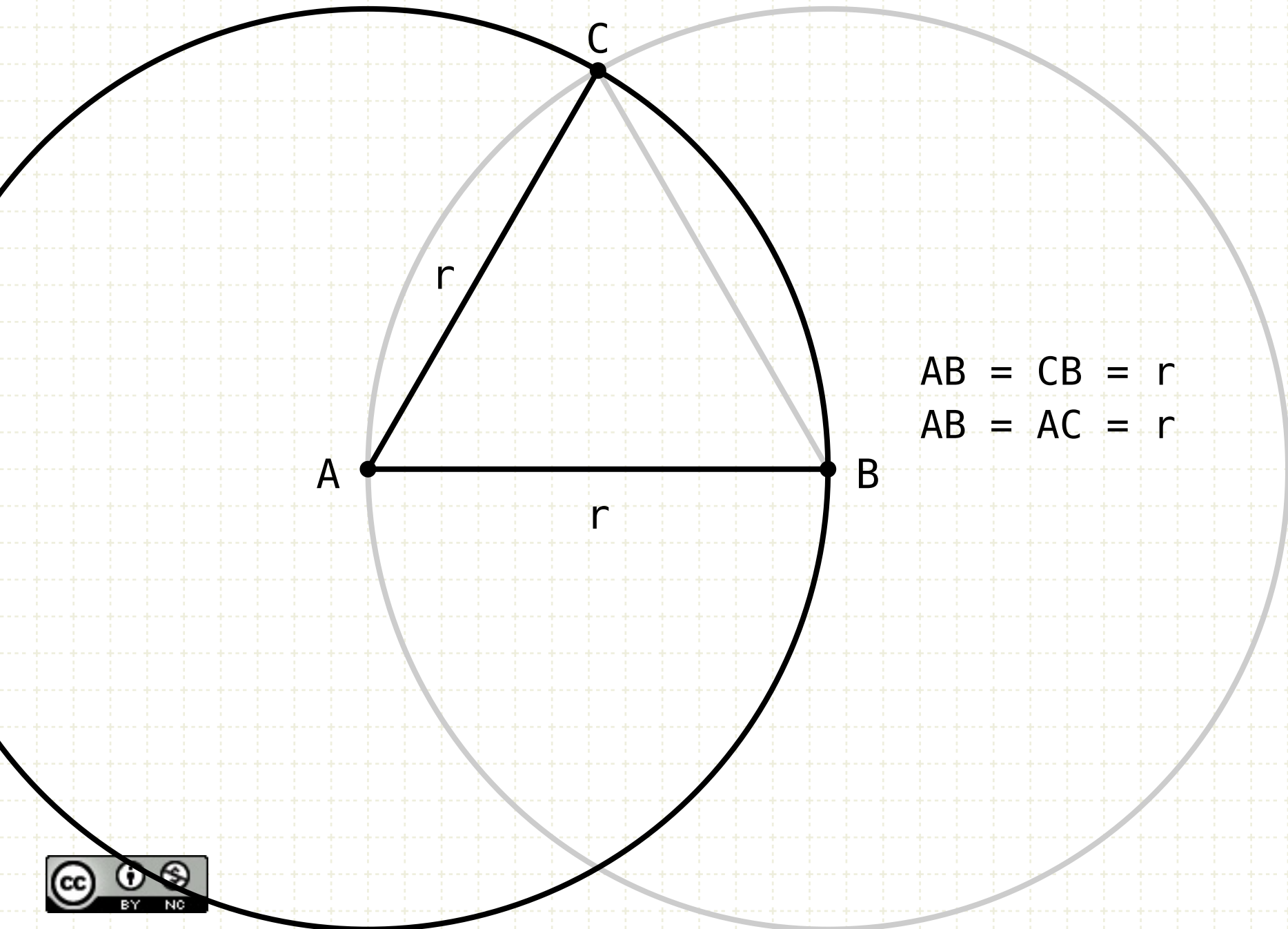
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Triangle ABC is an equilateral triangle

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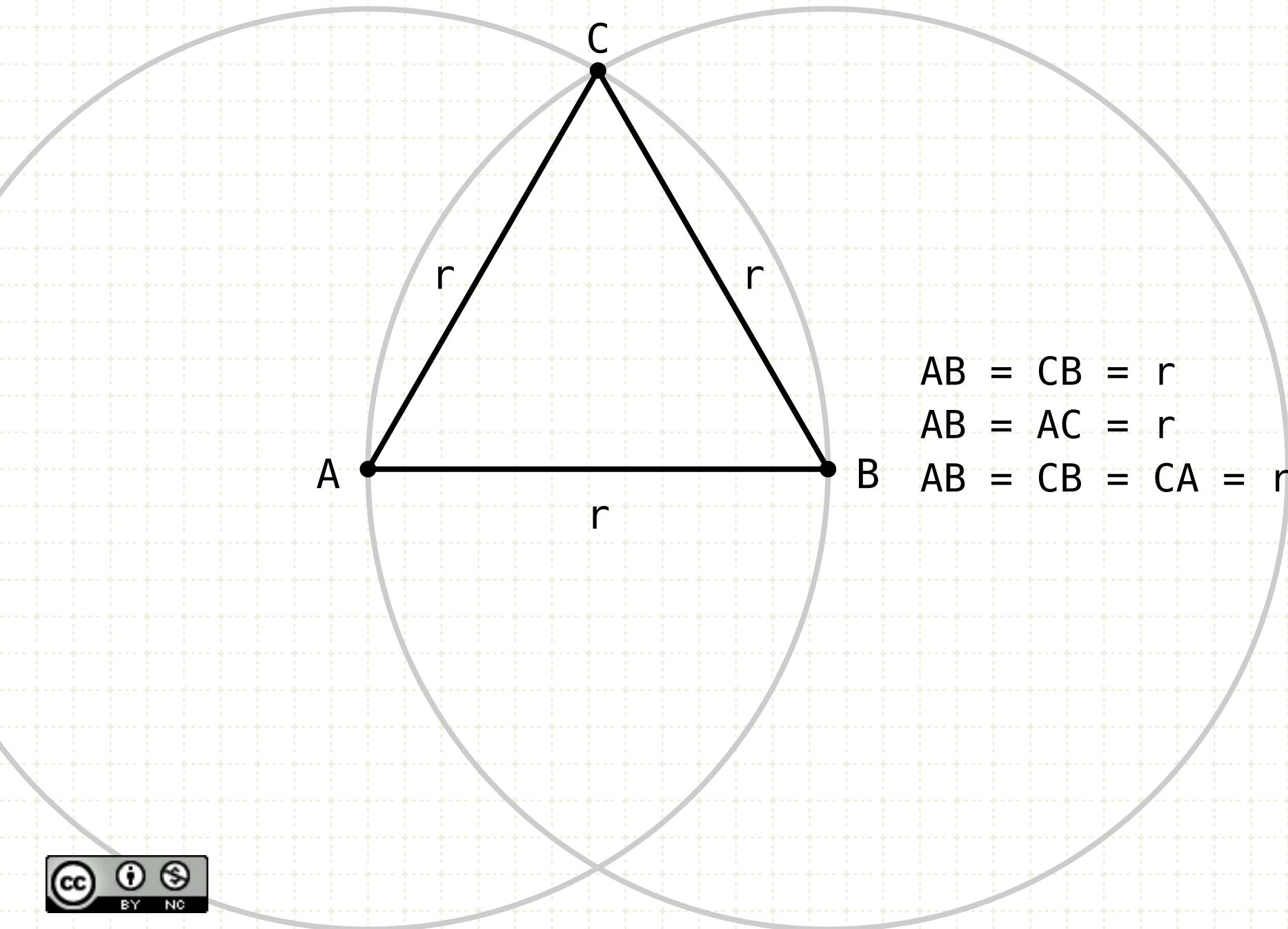
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AB and AC are radii of the same circle - hence they are equal

If AB equals AC and AB equals CB, then AC equals CB



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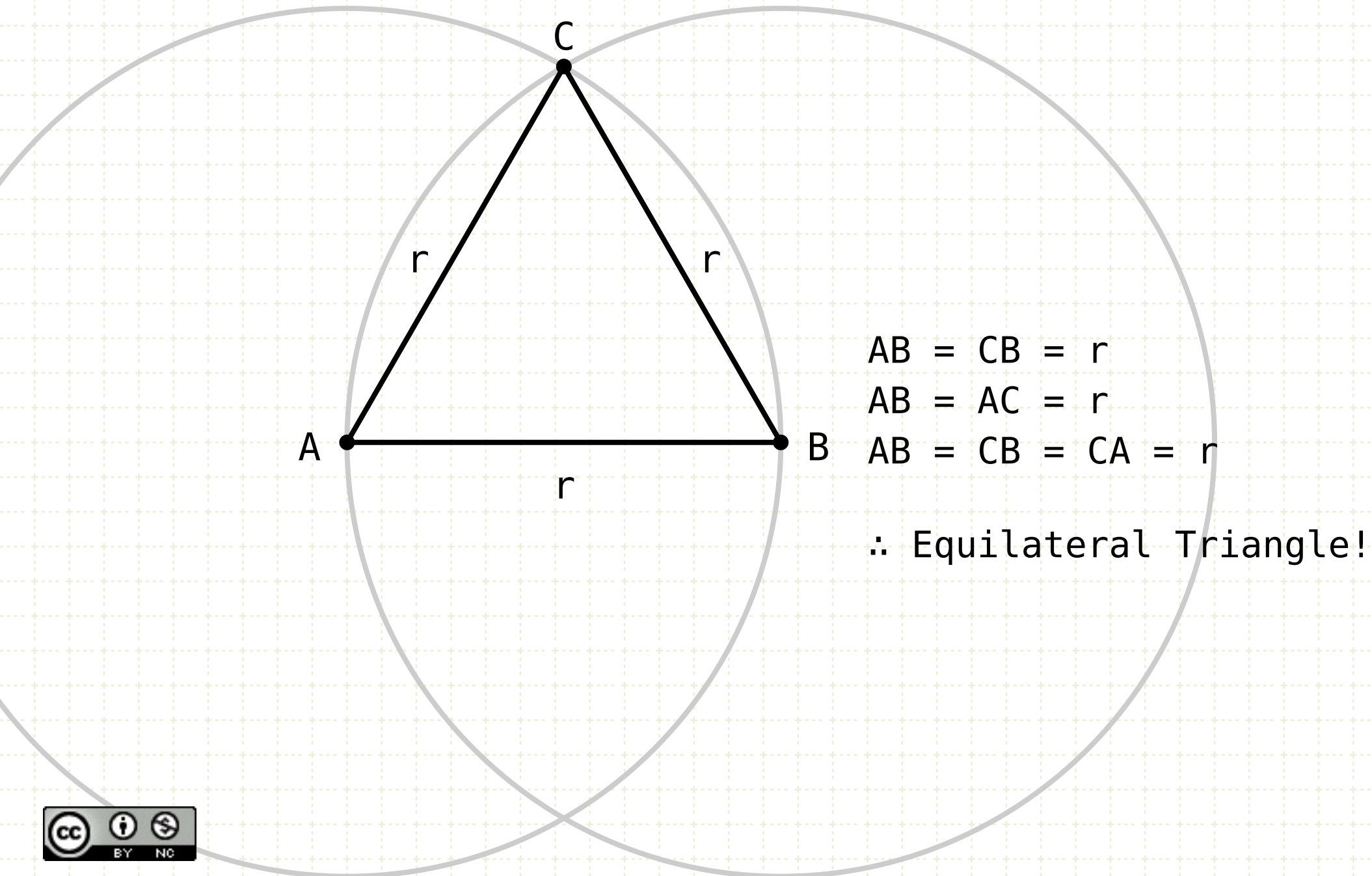
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