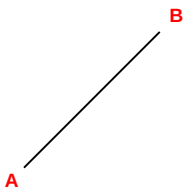
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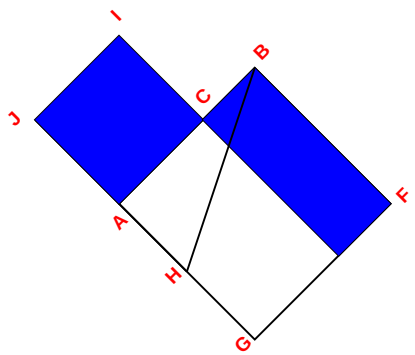
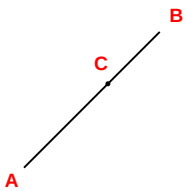


Book II - Proposition 11
To cut a given straight line so that the rectangle contained by the whole and one of the segments equals the square on the remaining segment.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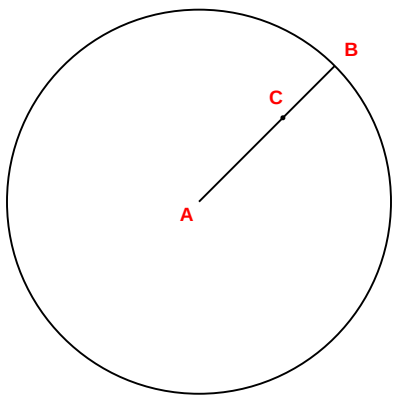
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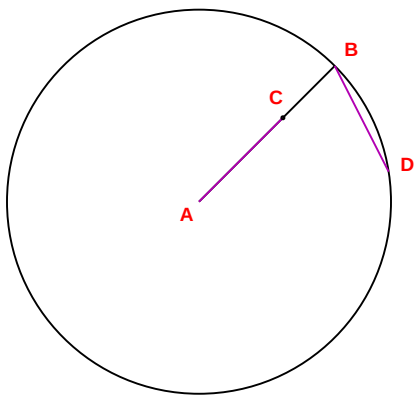
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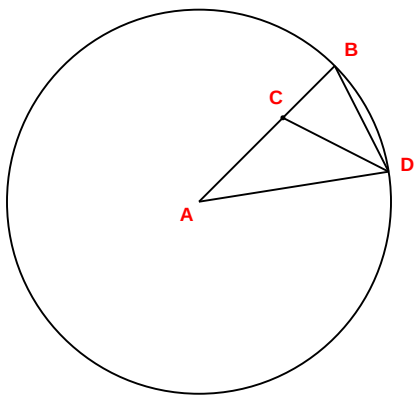
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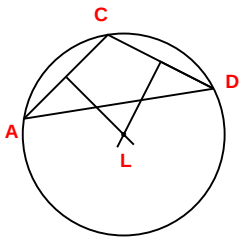
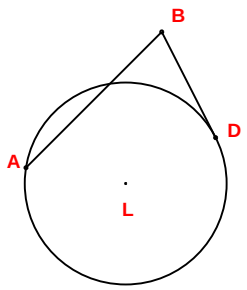
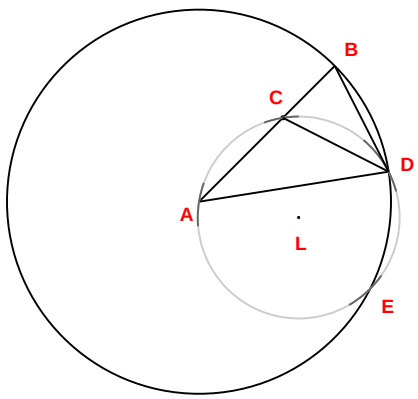


Book IV - Proposition 5
To circumscribe a circle about a given triangle.



Book III - Proposition 37

If a point is taken outside a circle and from a point there fall on a circle 2 straight lines, if one of them cuts the cirlce and the other falls on it and if further the rectangle contained by the whole straight line which cuts the cirlcle and the straight line intercepted on it outside between the point and the convex circumference equals the square on the straight line which falls on the circle, then the straight line which falls on it touches the circle.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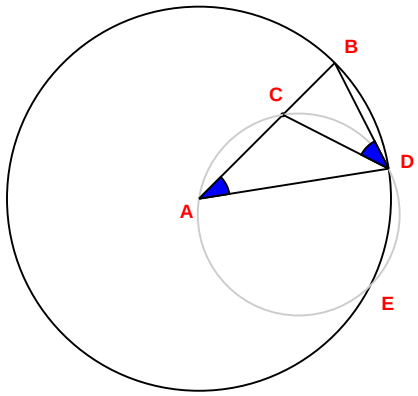
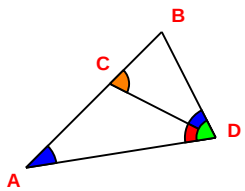
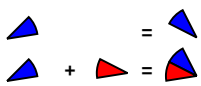
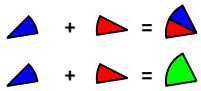


Book III - Proposition 32







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Book I - Proposition 32

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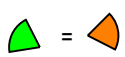

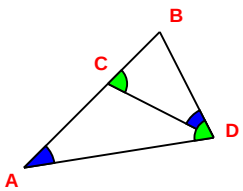
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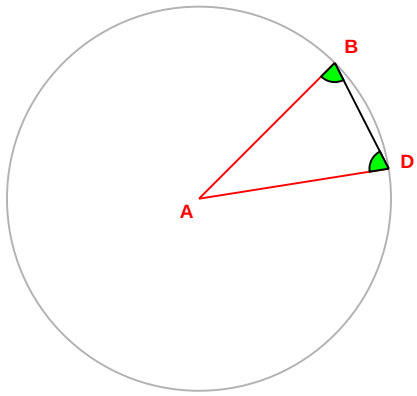
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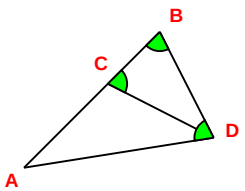
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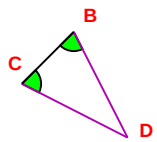
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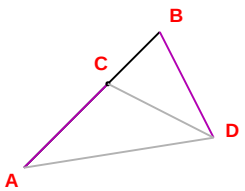
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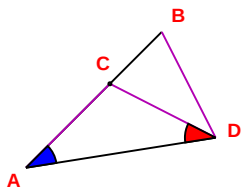
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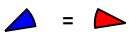

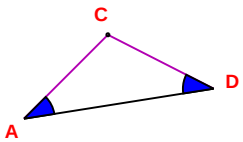
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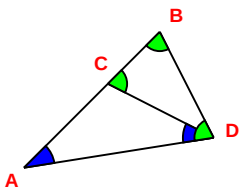
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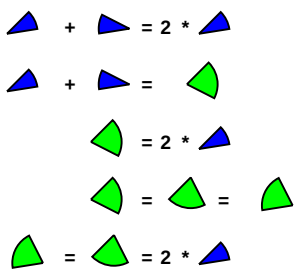
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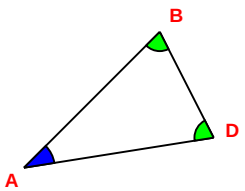
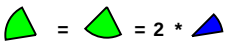
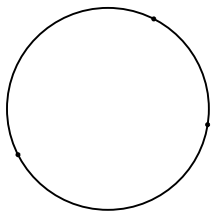


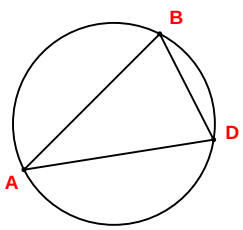


Q.E.D

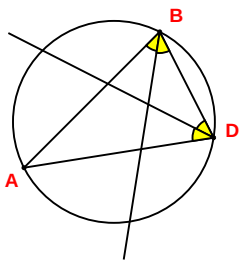
the isosceles triangle ABD has been constructed having each of it's angles at the base BD double the remaining one - Book IV Prop 10.

GIVEN

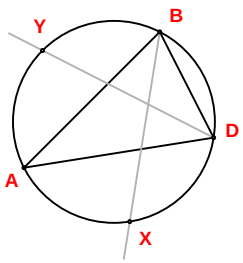




Book IV - Proposition 2



Book I - Proposition 9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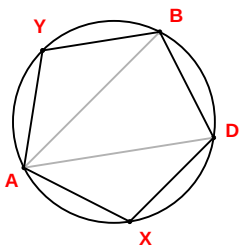
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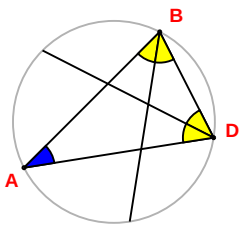
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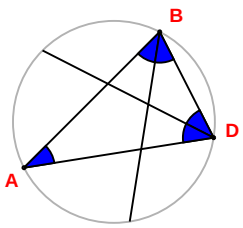
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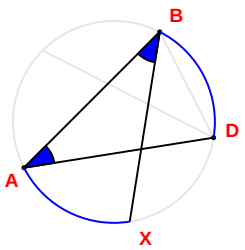
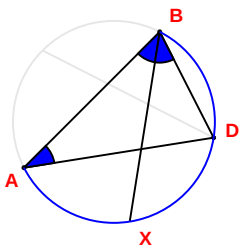
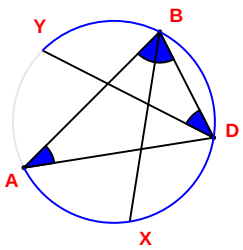


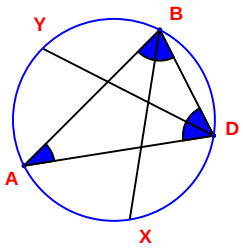
Book III - Proposition 26



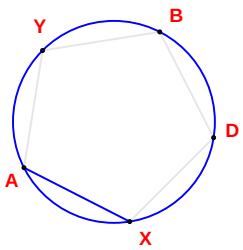
Book III - Proposition 26



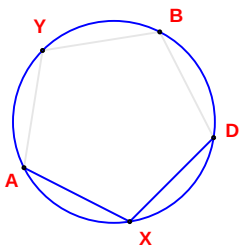
Book III - Proposition 26



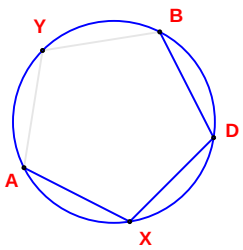
Book III - Proposition 26



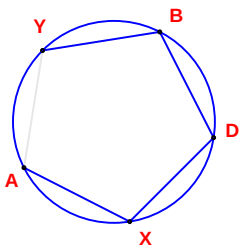
Book III - Proposition 29



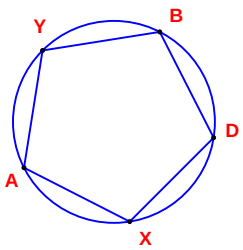
Book III - Proposition 29



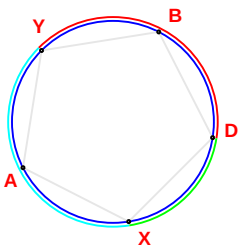
Book III - Proposition 29



Book III - Proposition 29



Equilateral pentagon



$\overset{\frown}{XA} = \overset{\frown}{AY} = \overset{\frown}{YB} = \overset{\frown}{BD}$

$\overset{\frown}{XA} + \overset{\frown}{AY} = \overset{\frown}{YB} + \overset{\frown}{BD}$

$\overset{\frown}{XAY} = \overset{\frown}{YBD}$

$\overset{\frown}{XAY} + \overset{\frown}{AY} = \overset{\frown}{YBD} + \overset{\frown}{BD}$

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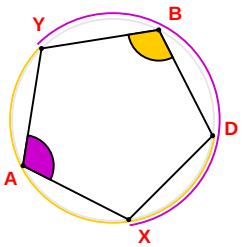
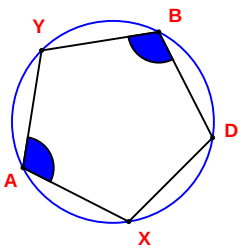


Book III - Proposition 27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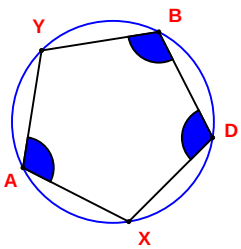
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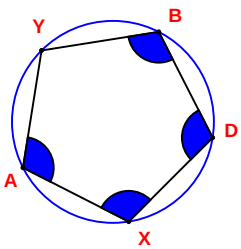
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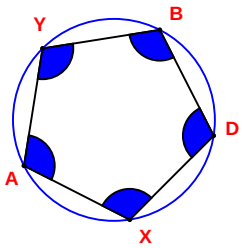

Q.E.D

To inscribe an equilateral and equiangluar pentagon in a given circle.
Book IV - Proposition 11

THE END