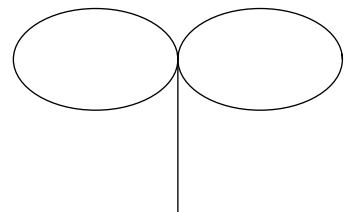
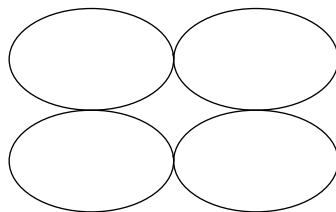
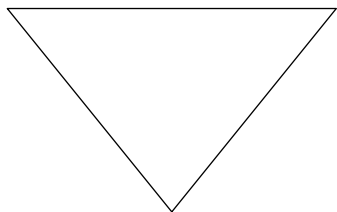
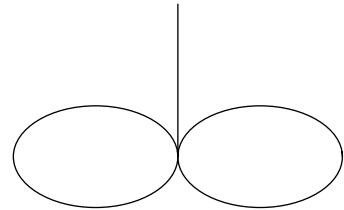
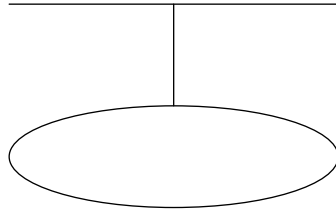
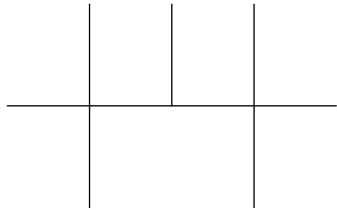
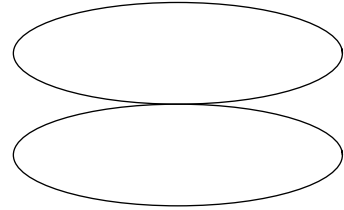
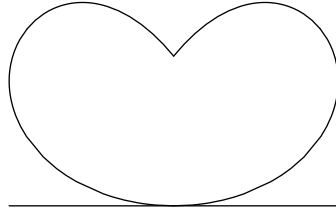
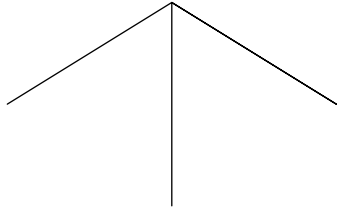


PATTERN RIDDLE

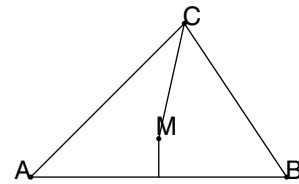
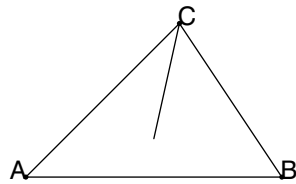
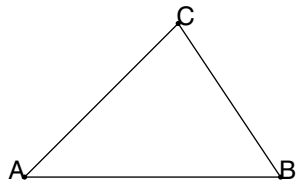
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PROOF VERIFICATION

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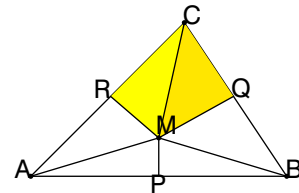
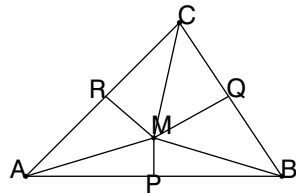
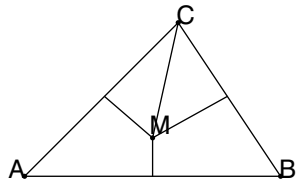
THEOREM: All triangles are isosceles



Start with an arbitrary triangle

Dissect the angle at C with a line L

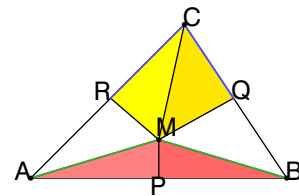
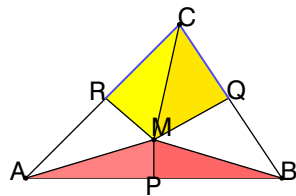
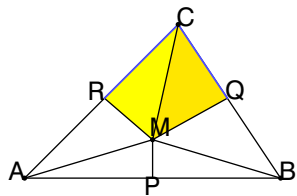
The mid normal to AB intersects L in M.



Form the normals from M to AC and BC

Leading to points R and Q.

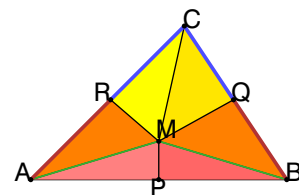
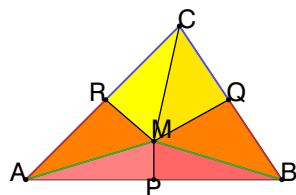
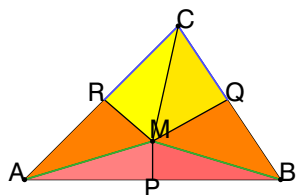
RMC and QCM are congruent (same angles and common side)



Therefore, $RC = QC$.

APM and BMP are congruent (right angle and two common sides)

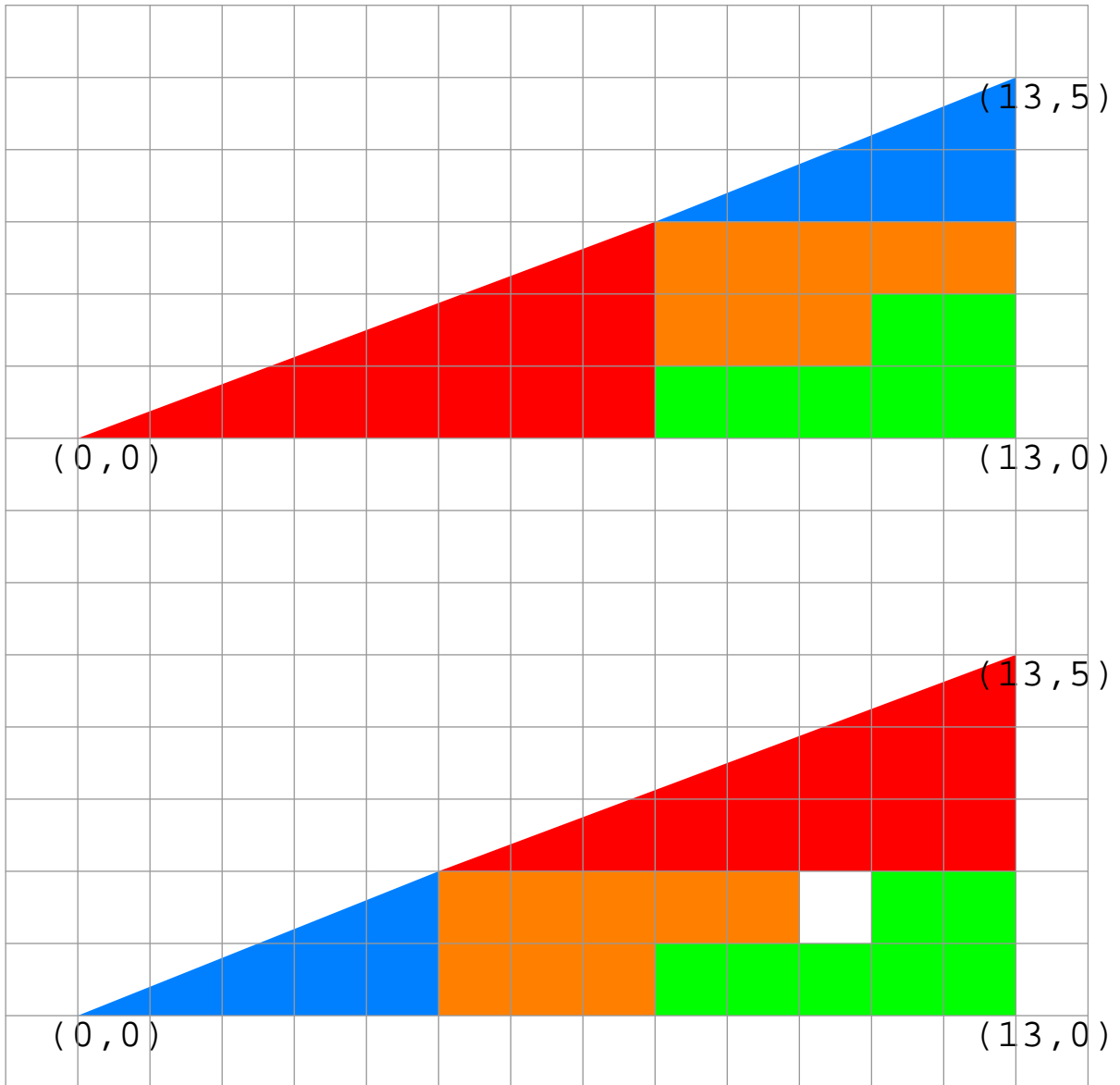
Therefore, $AP=BP$ and $AM=BM$.



AMR and BQM are congruent (right angle and two common sides)

Therefore $AR=BQ$. This and $RC=QC$ implies $AC=BC$.

Same argument for other sides shows $AB=AC$ too.



SWITCH ON SWITCH OFF

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	initial state	push 11	push 12	push 21	push 22																				
Problem A	<table border="1"><tr><td>1</td><td>0</td></tr><tr><td>0</td><td>0</td></tr></table>	1	0	0	0	<table border="1"><tr><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td></tr></table>	1	1	1	0	<table border="1"><tr><td>1</td><td>0</td></tr><tr><td>1</td><td>1</td></tr></table>	1	0	1	1	<table border="1"><tr><td>1</td><td>0</td></tr><tr><td>1</td><td>1</td></tr></table>	1	0	1	1	<table border="1"><tr><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td></tr></table>	0	1	1	1
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MAZES

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