

GCLC Prover Output for conjecture “proof42”

Area method used

June 16, 2010

$$(1) \quad S_{AMC} = S_{MBC} \quad , \quad \text{by the statement}$$

$$(2) \quad S_{CAM} = S_{BCM} \quad , \quad \text{by geometric simplifications}$$

$$(3) \quad \left(S_{CAA} + \left(\frac{1}{2} \cdot (S_{CAB} + (-1 \cdot S_{CAA})) \right) \right) = S_{BCM} \quad , \quad \text{by Lemma 29 (point } M \text{ eliminated)}$$

$$(4) \quad \left(0 + \left(\frac{1}{2} \cdot (S_{CAB} + (-1 \cdot 0)) \right) \right) = S_{BCM} \quad , \quad \text{by geometric simplifications}$$

$$(5) \quad \left(\frac{1}{2} \cdot S_{CAB} \right) = S_{BCM} \quad , \quad \text{by algebraic simplifications}$$

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$$(6) \quad \left(\frac{1}{2} \cdot S_{CAB} \right) = \left(S_{BCA} + \left(\frac{1}{2} \cdot (S_{BCB} + (-1 \cdot S_{BCA})) \right) \right) \quad , \quad \text{by Lemma 29 (point } M \text{ eliminated)}$$

$$(7) \quad \left(\frac{1}{2} \cdot S_{CAB} \right) = \left(S_{CAB} + \left(\frac{1}{2} \cdot (0 + (-1 \cdot S_{CAB})) \right) \right) \quad , \quad \text{by geometric simplifications}$$

$$(8) \quad 0 = 0 \quad , \quad \text{by algebraic simplifications}$$

Q.E.D.

There are no ndg conditions.
Number of elimination proof steps: 2
Number of geometric proof steps: 7
Number of algebraic proof steps: 9
Total number of proof steps: 18
Time spent by the prover: 0.000 seconds