

$$(1) \quad ABD \triangleleft = ACD \triangleleft,$$
$$(2) \quad ARD_{\triangleleft} = AQD_{\triangleleft}.$$
$$RDQ_{\triangleleft} = RAQ_{\triangleleft}.$$
$$RAQ_{\triangleleft} + QCP_{\triangleleft} + PBR_{\triangleleft} = 180^{\circ}$$
$$QCP_{\triangleleft} = QPC_{\triangleleft} \quad \text{és} \quad DBR_{\triangleleft} = BPR_{\triangleleft},$$
$$RAQ_{\triangleleft} = RPQ_{\triangleleft},$$
$$CDP_{\triangleleft} = \frac{1}{2} CQP_{\triangleleft}$$
$$PDB\triangleleft = \frac{1}{2}PRB\triangleleft.$$
$$\begin{aligned} CDB\angle &= \frac{1}{2}(CQP\angle + PRB\angle) = \frac{1}{2}[(180^\circ - 2QCP\angle) + (180^\circ - 2RBP\angle)] = \\ &= 180^\circ - QCP\angle - RBP\angle = BAC\angle. \end{aligned}$$

A 4. megoldás nem általánosítható, már a szimmetrikus trapéz felhasználása miatt sem.