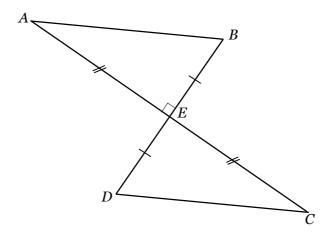


Geometry check-ups: Sample answers

 $\underline{http://topdrawer.aamt.edu.au/Geometric-reasoning/Misunderstandings/Similar-or-congruent/What-is-wrong-with-this-proof}$

1. In the diagram below, AE = EC and BE = DE. $\angle AEB = 90^{\circ}$.



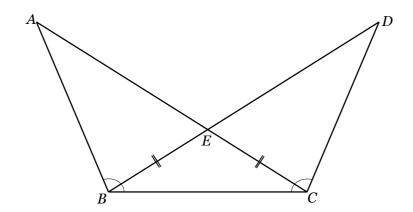
- (a) Prove that $\triangle ABE = \triangle CDE$.
- (b) Hence or otherwise prove that $AB \mid\mid DC$.

AAMT — TOP DRAWER TEACHERS

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2. In the diagram below, $\angle ABC = \angle DCB$ and BE = EC.



- (a) Prove that $\triangle ABC$ is congruent to $\triangle DBC$.
- (b) Hence prove that AE = ED.

G)
$$\angle ABC = \angle DBC$$
 (given)

 $BE = EC$ (given)

 BC is common

 $\triangle ABC = \triangle DBC$ (SAS)