

Handout 3: Oh, Yeah? Prove It

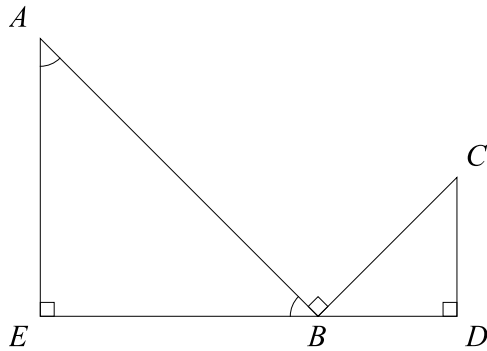


Figure 1

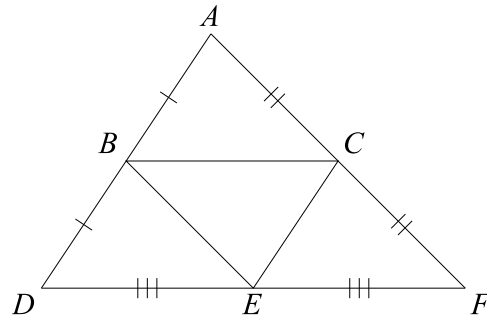


Figure 2

Use Figure 1 to prove that $\triangle ABE \sim \triangle CBD$ in questions 1-5.

1. What allows us to say that $\angle AEB = \angle CDB = \angle ABC = 90^\circ$?
2. What's the sum of the measures of $\angle ABE$ and $\angle EAB$?
3. Fill in the blanks: _____ = _____ = 45° .
4. Find the measure of $\angle CBD$ and $\angle BCD$.
5. Prove that $\triangle ABE \sim \triangle CBD$.

Use Figure 2 to prove that $\triangle DAF \sim \triangle BEC$ in questions 6 – 10.

6. What allows us to say that B is the midpoint of \overline{AD} ?
7. Find the ratio $BC : DF$.
8. Find the ratio $BE : AF$.
9. Find the ratio $CE : AD$.
10. Prove that $\triangle DAF \sim \triangle BEC$.