Problem of the Week

Problem E

Overlapping Shapes 3

Austin draws $\triangle ABC$ with $AB = 3$ cm, $BC = 4$ cm, and $\angle ABC = 90°$. Lachlan then draws $\triangle DBF$ on top of $\triangle ABC$ so that D lies on AB, F lies on the extension of BC, $DB = 2$ cm, and sides AC and DF meet at E. If $AE = 3$ cm and $EC = 2$ cm, determine the length of CF.