Problem of the Week

Problem E

Overlapping Shapes 3

Austin draws $\triangle ABC$ with $AB = 3$ cm, $BC = 4$ cm, and $\angle ABC = 90^\circ$. 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 $CF$. 