Application theorem:

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If $g(f(C))$ lies on the opposite side of $\overleftrightarrow{DE}$ from F, then let h be the reflection across the line $\overleftrightarrow{DE}$
Let g be the rotation around D by angle $\angle f(B)DE$ (where $f(B)$ is on the same side of $\overleftrightarrow{Df(B)}$ as E)
Then by lines _____, _____, _____ and _____, $h \circ g \circ f$ satisfies the conditions for the conclusion to be true.
Construct circles C_1 and C_2 with centers A and D respectively, and with radius $d(A,D)$, and let P be a point in the intersection of C_1 and C_2
Given triangles ΔABC and ΔDEF
Let f be the rotation around point P by angle $\angle APD$ (where $f(A)$ is on the same side of $\overleftrightarrow{AP}$ as D).

then $h(g(f(C)))$ lies on the opposite side of $\overleftrightarrow{DE}$ from $g(f(C))$	then $g \circ f$ maps A to D and maps B to a point on $\overrightarrow{DE}$
then $f(A) = D$	then $\overrightarrow{Dg(f(B))} = \overrightarrow{DE}$
then $g \circ f$ satisfies the conditions for the conclusion to be true	then $\angle APf(A) \cong \angle APD$ and $f(P) = P$
then $\angle f(B)Dg(f(B)) \cong \angle f(B)DE$ and $g(D) = D$	then $\overline{PA} \cong \overline{Pf(A)}$
then $g \circ f$ is an isometry	then $h(g(f(B))) = g(f(B))$
then $h \circ g \circ f$ is an isometry	then $\overrightarrow{Pf(A)} = \overrightarrow{PD}$
then $h(g(f(B))) \in \overrightarrow{DE}$	then $h(g(f(C)))$ lies on the same side of $\overleftrightarrow{DE}$ as F
then $\overline{PA} \cong \overline{f(P)f(A)}$	then $h(g(f(A))) = g(f(A)) = D$
Because f is a rotation,	then $g(f(A)) = D$
by theorem 1 and lines _____ and _____,	Because g is a rotation,
By theorem 1 and lines _____ and _____,	Because f is an isometry,
By theorem 2 and lines _____ and _____	Since h is a reflection,
By theorem 8 and lines _____ and _____,	Since h fixes points on $\overleftrightarrow{DE}$, and by line _____,
By theorem 8 and lines _____ and _____,	Since h fixes points on $\overleftrightarrow{DE}$, and by line _____,
If $g(f(C))$ lies on the same side of $\overleftrightarrow{DE}$ as F then by lines _____, _____ and _____,	By lines ____ and _____,
By lines _____ and _____,	By lines _____ and _____,
By lines _____ and _____,	By lines _____ and _____,