Problems #3
Due: 2 February 2017

1. Complete Level 18 in *Euclid: The Game* and provide a proof (in the style of Euclid) that your solution is correct.

2. Given an angle with vertex $A$ and a point $B$ inside the angle. Construct perpendiculars $BC$ and $BD$ to the two sides of the angle. Draw the line segment $CD$ and drop perpendiculars $AE$ and $BF$ to the line $CD$. Prove that $CE = DF$.

3. Given a rectangle, construct a square with the same area.
   
   **Hint.** Read Proposition II.14 in Euclid’s *Elements*. 