Assignment #5
Tinkering with triangles
Due on Thursday, 16 February, 2012.

In both of the questions below suppose D and E are the midpoints of sides AB and AC, respectively, of $\triangle ABC$.
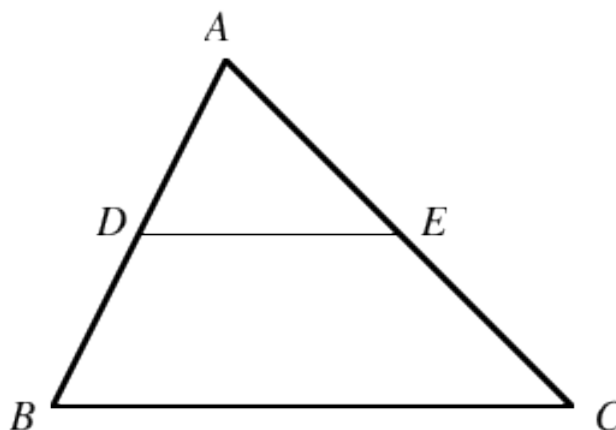
1. Show that $DE \parallel BC$ and $BC = 2DE$. *[5]*

Hint: First show that $\triangle ABC \sim \triangle ADE$.

2. Show that $\triangle ABC$ has four times the area of $\triangle ADE$. *[5]*

Hint: Show that $\triangle ABC$ can be divided up into four triangles, each of which is congruent to $\triangle ADE$.