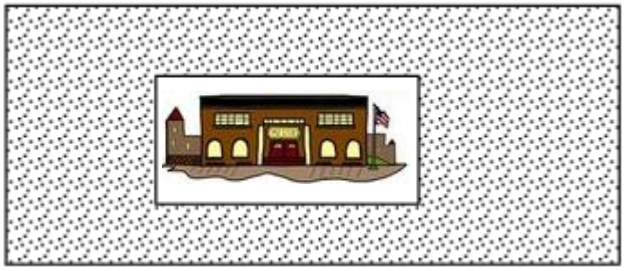
Algebra Problem of the Week Name _____

Due: **November 29, 2016**

A rectangular school building is surrounded by a rectangular yard. The shaded region represents the grass. The dimensions of the larger rectangle (entire yard) is $\left(2x^2+4x+3\right)$ by $\left(3x+4\right)$ and the dimensions of the smaller rectangle (school building) is $\left(x^2-x+2\right)$ by $\left(x+1\right)$.



Part 1: Find the area of the shaded region (grass) in terms of *x* and in simplest form.

Part 2: Last year, the school decided to fence in the entire yard (larger rectangle). The fencing cost $12 per foot and bill for the fencing totaled $9000. Determine the actual dimensions of the yard to the *nearest tenth of a foot*.