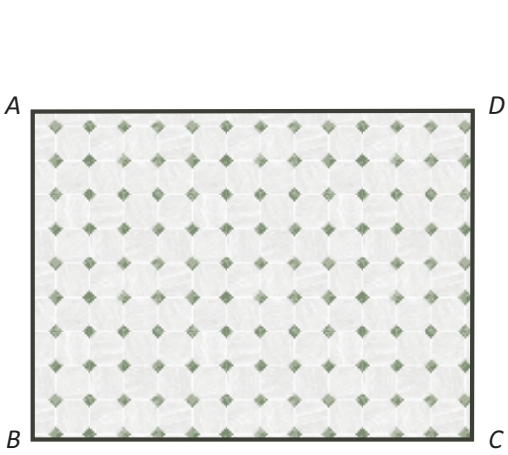
Problem of the Week

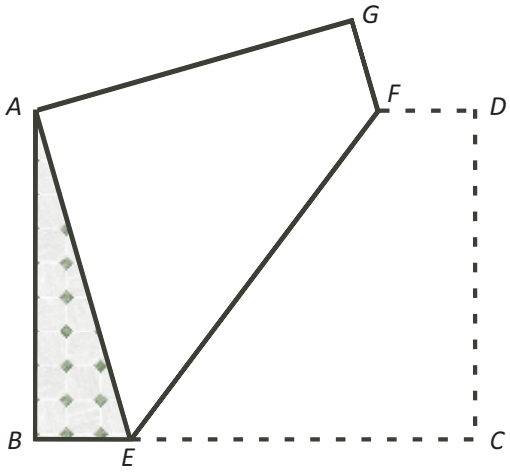
Problem E

Paper Folding 101

The problem today involves simple paper folding. In fact, only one fold is required.

A rectangular piece of paper is 30 cm wide and 40 cm long. The paper has a pattern on one side and is plain on the other. The paper is folded so that the two diagonally opposite corners, A and C, coincide. (This is illustrated on the diagram to the right.)





Determine the length of the crease, FE, created by the fold.