

**MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 4 - JANUARY 2014
ROUND 5 GEOMETRY: SIMILARITY OF POLYGONS**

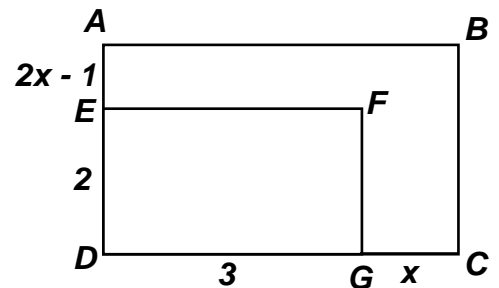
ANSWERS

A) _____

B) _____

C) _____

- A) Compute the value of x for which the two rectangles are similar, given that $AE < ED$.



- B) We know that all squares are similar. Consider two squares whose sides are $1 + x$ and $2 - x$. Compute the two values of x for which the ratio of the areas of these squares is $9 : 4$.

- C) Given: $m\angle DAC = m\angle DCA$, $\triangle BAC \sim \triangle BDA$, $AB = 1$, $AC = 2$
Compute AD .

