

MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 2 - NOVEMBER 2016
ROUND 3 PLANE GEOMETRY: AREAS OF RECTILINEAR FIGURES

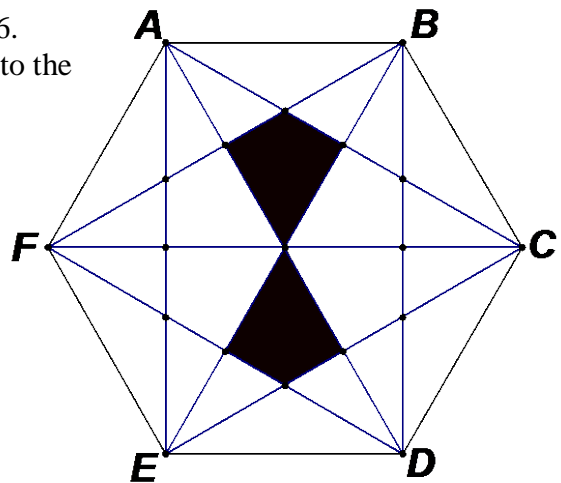
ANSWERS

A) _____ : _____

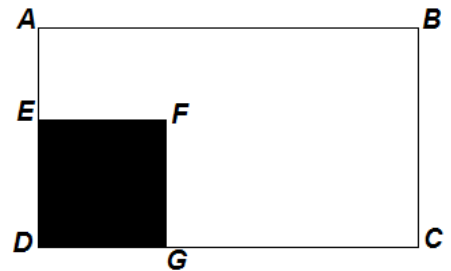
B) _____

C) _____

- A) $ABCDEF$ is a regular hexagon with side of length 6.
 Compute the ratio of the area of the shaded region to the
 area of the unshaded region in hexagon $ABCDEF$.



- B) $DEFG$ is a square of side x . $ABCD$ is a rectangle with sides
 $AB = 18$ and $BC = 14$.
 The ratio of the area of the unshaded region to the area of
 the shaded region equals $\frac{AB}{BC}$. Compute x .



- C) In a rhombus with side 7, the long diagonal has length 11. Compute the length of the altitude
 of this rhombus.