

MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 4 - JANUARY 2014
ROUND 2 ALG 1: FACTORING AND/OR EQUATIONS INVOLVING FACTORING

ANSWERS

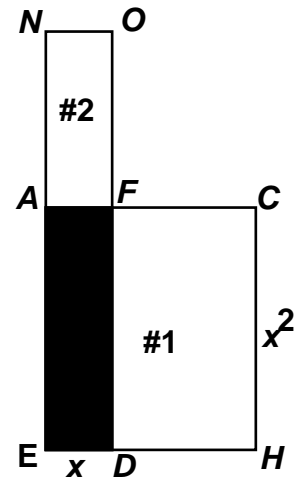
A) _____

B) _____ units²

C) _____

- A) For several positive integer values of k , the trinomial $x^2 - kx + 180$ can be factored.
 Determine the minimum value of k .

- B) Consider the two overlapping rectangles $EACH$ and $NODE$.
 Compute the area of the shaded region if $NE = 45$, $HE = 14$ and
 the area of region #1 – area of region #2 equals
 the area of the shaded region $DEAF$.



- C) Given: $-x(2x - 3y - 4) = y^2 + 2y$
 Solve for y in terms of x .