MASSACHUSETTS MATHEMATICS LEAGUE
CONTEST 2 - NOVEMBER 2011
ROUND 3 PLANE GEOMETRY: AREAS OF RECTILINEAR FIGURES

ANSWERS

A) _____ in^2

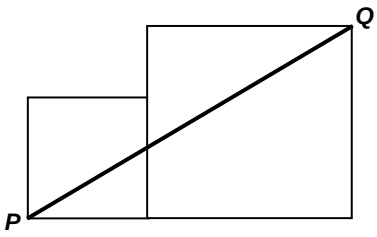
B) _____ units

C) _____ units

****** NO CALCULATORS IN THIS ROUND ******

A) Rectangle *PARK* is 3 inches by 5 inches.
T lies on $\overline{KR}$ such that ΔPTK is isosceles.
Compute the area of *TRAP*.

B) The ratio of the lengths of the sides of the two squares at the right is 3 : 2. The sum of their areas is 3328 $units^2$.
Compute the length of $\overline{PQ}$.



D) If the side of a square is increased by 25%, its area equals that of a rectangle whose sides have lengths in a 2 : 5 ratio and whose perimeter is 28 units.
Compute the original length of a side of the square.