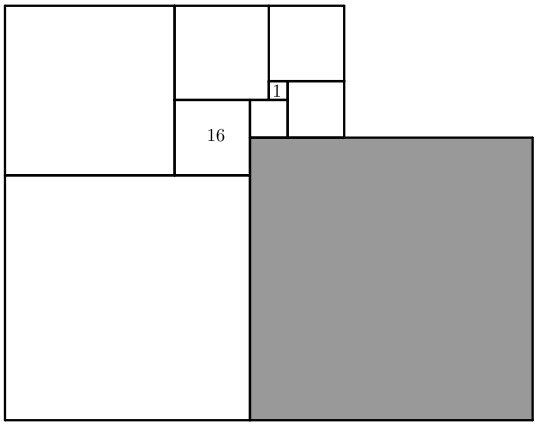
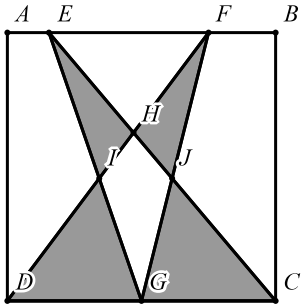
2025 July AMC 10 Week 2 Day 2 - Polygons-New

1 （1分）The figure below is composed of 9 squares. Given that the area of the smallest square is 1 square centimeter, what is the area of the shaded square?



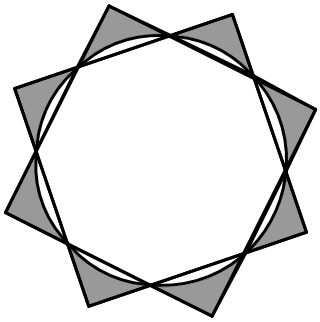
A. 196cm^2 B. 225cm^2 C. 256cm^2 D. 289cm^2 E. 324cm^2

2 （1分）As shown in the figure, quadrilateral $ABCD$ is a square with side length 8, and the area of quadrilateral $GIHJ$ is 5. What is the area of the shaded part in the figure?



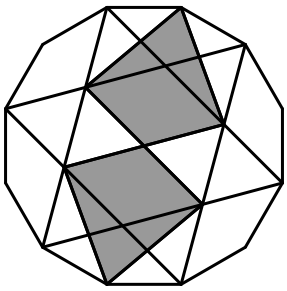
A. 22 B. 24 C. 26 D. 28 E. 30

3 （1分）The pattern in the figure below consists of 1 circle and 2 squares of the same size (the common part of the two squares is a regular octagon). If the radius of the circle is $60cm$, then what is the area of the shaded part? (Take $\pi = 3.14$)



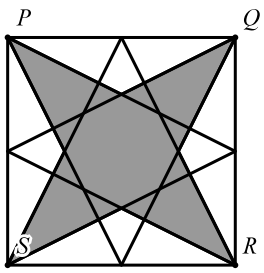
A. $2096cm^2$ B. $3096cm^2$ C. $4096cm^2$ D. $5096cm^2$ E. $6096cm^2$

4 （1分）As shown in the figure, the area of a regular dodecagon is $2022cm^2$. What is the area of the shaded part in the figure?



A. $504cm^2$ B. $568cm^2$ C. $612cm^2$ D. $674cm^2$ E. $760cm^2$

5 （1分）Within the square $PQRS$, lines are drawn from each corner to the middle of the opposite sides as shown. What fraction of $PQRS$ is shaded?



A. $\frac{1}{4}$ B. $\frac{1}{3}$ C. $\frac{3}{8}$ D. $\frac{1}{2}$ E. $\frac{2}{3}$