

Squares

PROBLEM: Starting with a square of size X , bisect each side and connect the midpoints to form 4 squares inside the original square. Color the upper left and lower right hand squares. Repeat the bisection and coloring process on the two uncolored squares. Continue the process in this manner until a new starting length of a side becomes < 1 . This means that if a side = 1, the sides are bisected and the areas are calculated as above. The next start of an evaluation when a side = $\frac{1}{2}$ will stop the process with no further calculations. What is the total area of the colored squares?

INPUT: There will be 5 input lines. Each line will be a rational number representing the side of the square.

OUTPUT: For each input line, print the total area of the colored squares. Answers within $\pm .001$ of the listed answers will be accepted.

SAMPLE INPUT

1. 4
2. 24
3. 16
4. 10
5. 20

SAMPLE OUTPUT

1. 14
2. 558
3. 248
4. 93.75
5. 387.5