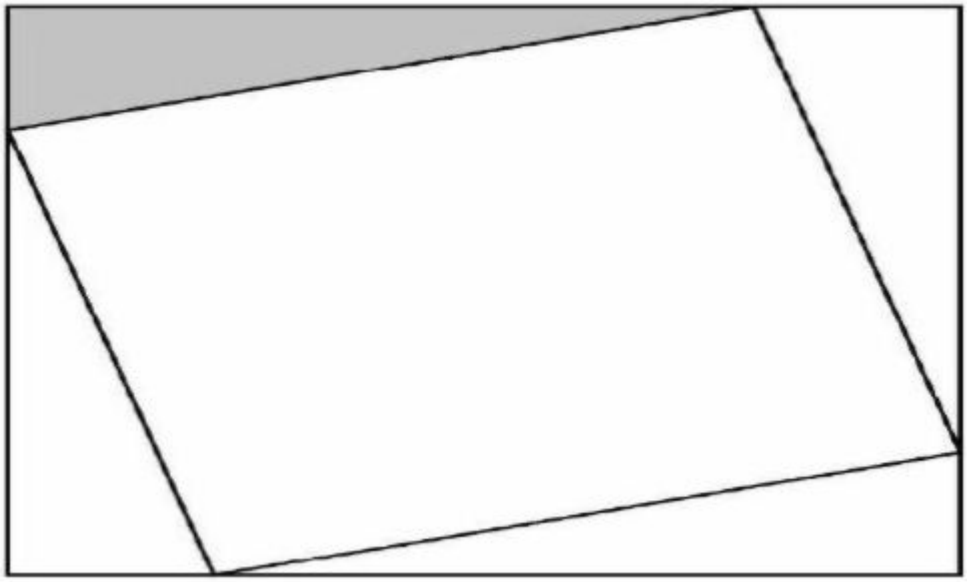
Think Academy

AMC Day18

1 （1分）Right triangle ABC has leg lengths $AB = 20$ and $BC = 21$. Including $\overline{AB}$ and $\overline{BC}$, how many line segments with integer length can be drawn from vertex B to a point on hypotenuse $\overline{AC}$? （2018 AMC 10A Problem 16）

A. 5　　B. 8　　C. 12　　D. 13　　E. 15

2 （1分）A square of area 2 is inscribed in a square of area 3, creating four congruent triangles, as shown below. What is the ratio of the shorter leg to the longer leg in the shaded right triangle? （2023 AMC 10A Problem 11）

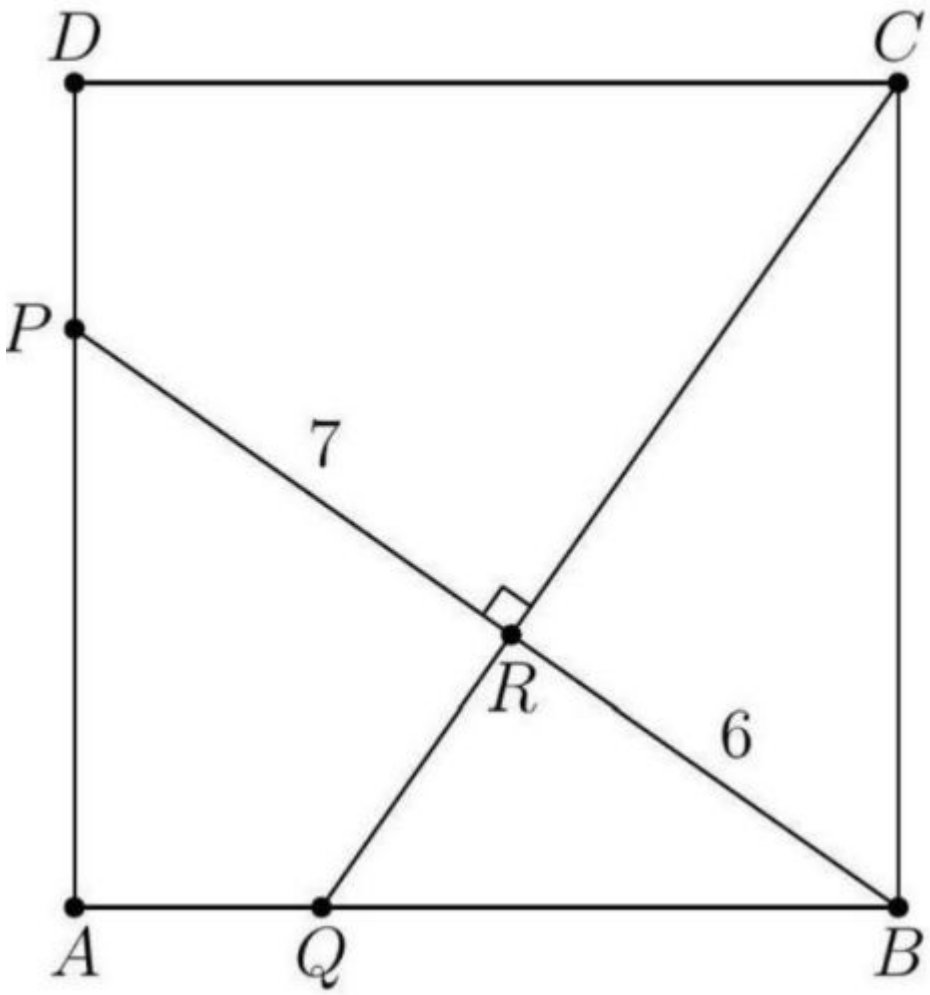


A. $\frac{1}{5}$　　B. $\frac{1}{4}$

C. $2-\sqrt{3}$　　D. $\sqrt{3}-\sqrt{2}$

E. $\sqrt{2}-1$

3 （1分）In square $ABCD$, points P and Q lie on $\overline{AD}$ and $\overline{AB}$, respectively. Segments $\overline{BP}$ and $\overline{CQ}$ intersect at right angles at R, with $BR=6$ and $PR=7$. What is the area of the square? (2021 Fall AMC 10B Problem 15)



A. 85　　B. 93　　C. 100　　D. 117　　E. 125