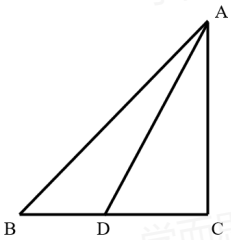
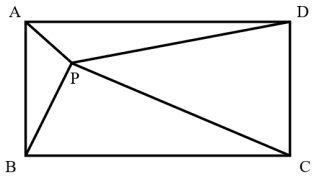
2025 July AMC 10 Week 1 Day 1 - Pythagorean Theorem-new

1 （1分）In $Rt\triangle ABC$, $AB=4\sqrt{2}$, $AD=2\sqrt{5}$, and $BD=2$. What is the length of AC?



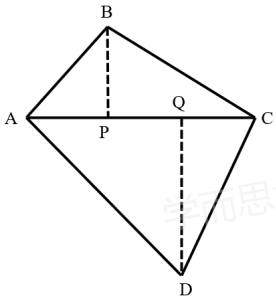
A. $\sqrt{6}$　B. 3　C. $2\sqrt{3}$　D. 4　E. $2\sqrt{6}$

2 （1分）Point P lies inside rectangle $ABCD$. Given $PA=5$, $PB=10$, and $PC=14$, what is the length of PD?



A. 10　B. 11　C. 12　D. 13　E. 14

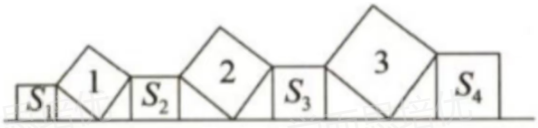
3 （1分）In quadrilateral $ABCD$, $AB=9$, $BC=12$, $CD=13$, $DA=14$, and diagonal $AC=15$. Perpendiculars are drawn from B and D to AC, intersecting AC at points P and Q respectively. What is the length of PQ?



A. 3　B. 4　C. 5　D. 6　E. 7

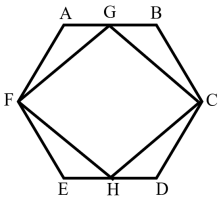
4 （1分）

Seven squares are placed in a line in sequence. It is known that the areas of the 3 obliquely placed squares are 1, 2, and 3 respectively, and the areas of the 4 horizontally placed squares are A_1, A_2, A_3, and A_4 respectively. What is the value of $A_1 + A_2 + A_3 + A_4$?



A. 3 B. 4 C. 5 D. 6 E. 7

5 （1分）The side length of regular hexagon $ABCDEF$ is 2, and $AG = BG$, $DH = EH$. What is the perimeter of $GCHG$?



A. 8 B. $4\sqrt{5}$ C. $4\sqrt{6}$ D. $4\sqrt{7}$ E. $8\sqrt{2}$