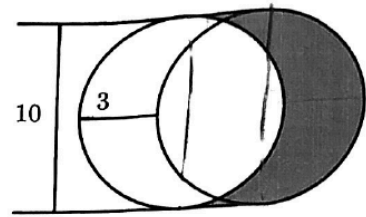


2025 Summer Think Academy Errors

Q1

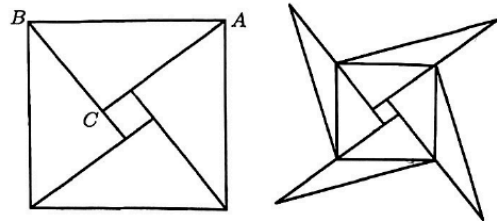
Calculate the area of the shaded part of the diagram, which is _____ .



Q2

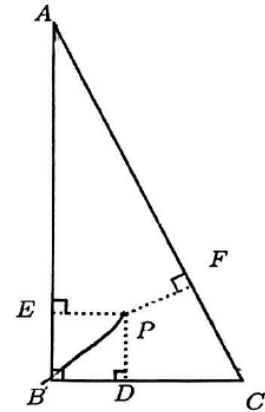
- ② The figure on the left below shows a square surrounded by four congruent right triangles, where $AC = 6$ and $BC = 5$.

Extend the legs of the four right triangles whose length is 6 by twice respectively. We can obtain the "mathematical windmill" as shown in the figure on the right below, and then the perimeter of the windmill is _____ .



Q3

-) As shown in the figure below, the area of triangle BAC is 96 cm^2 . Point P is inside the triangle, and line segments that originate from P are perpendicular to the sides (AC, AB and BC) of the triangle. Given $PE = PF = PD = 4 \text{ cm}$, the perimeter of triangle ABC is _____ cm.



Q4

How many ordered pairs of integers (p, q) satisfy the equation $p^2 + 3pq + q^2 = p^2 q^2$?

- A. 7 B. 1 C. 3 D. 6 E. 5

Q5

How many ordered pairs of integers (m, n) satisfy the equation $m^2 + mn + n^2 = m^2 n^2$?
(2023 AMC 10B Problems, Question #14)

- A. 7 B. 1 C. 3 D. 6 E. 5

Q6

If the average of some different prime numbers is 21, then the largest one of these prime numbers is _____.

Q7

Amy and Carlos attended an archery contest. Each of them shot five arrows and the points they could get from each shoot are natural numbers among 1~10. Each of them found that the product of his/her points was 1764. Amy's total points were 4 more than Carlos'. Amy got _____ points and Carlos got _____ points.

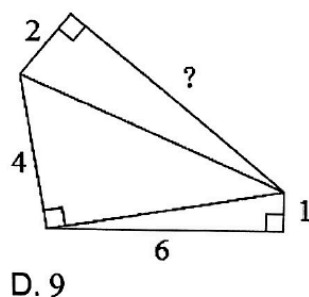
Q8

As shown in the figure, 5 isosceles right-angled triangles are stacked together. Their hypotenuses are all on a straight line. The smallest isosceles right-angle triangle has a hypotenuse length of 4 cm, and every next 4 isosceles right-angled triangles increase its hypotenuses by 4 cm. The area of the shaded part of the figure in square centimeter(s) is _____.



Q9

The figure below is made up of three right triangles. Find the length of question mark.



A. 6

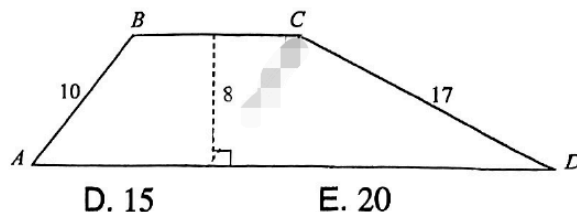
B. 7

C. 8

D. 9

Q10

The area of trapezoid $ABCD$ is 164 cm^2 . The altitude is 8 cm, AB is 10 cm, and CD is 17 cm. What is BC , in centimeters? (2003 AMC 8 Problem, Question #21)



A. 9

B. 10

C. 12

D. 15

E. 20

Q11

$\overline{26B789}$ can be divisible by 13. The value of B is ____.

Q12

Three members of the Euclid Middle School girls' softball team had the following conversation.

Ashley: I just realized that our uniform numbers are all 2-digit primes.

Bethany: And the sum of your two uniform numbers is the date of my birthday earlier this month.

Caitlin: That's funny. The sum of your two uniform numbers is the date of my birthday later this month.

Ashley: And the sum of your two uniform numbers is today's date.

What number does Caitlin wear? (2014 AMC 8 Problem, Question #23)

- A. 11 B. 13 C. 17 D. 19 E. 23

