The diagram shows a geometric figure. The text reads:

"d + u + \frac{m}{n} \text{ where } m, u, \text{ and } d \text{ are positive integers, bounded by these lines is } \frac{d}{u}, \text{ where } m, \text{ and } d \text{ are relatively prime, and } m \text{ is not divisible by the square of any prime. Find } m + u + d."

Each vertex of quadrilateral ABCD is connected with the midpoints of its two opposite sides by straight lines (see the figure below). The area of the figure bounded by these lines is \( \frac{d}{u} \), where \( m, u, \text{ and } d \) are positive integers, bounded by these lines is \( \frac{d}{u} \), where \( m, \text{ and } d \) are relatively prime, and \( m \) is not divisible by the square of any prime. Find \( m + u + d \)."
2. There are \( N \) ordered triples \((x,y,z)\) of integers such that \(0 \leq x < y < z < 48\) and \( x^2 + z^2 + y^2 \) is divisible by 49.
Show instructions. Time remaining: 1:4:22

Answered: 0 Unanswered: 6

Your answer:

Positive integers. Find $N + N'$. They are nearest to each other at $\frac{N}{12}$ hours after 7:00 AM, where $M$ and $N$ are relatively prime and apart at 1:00 PM. They are nearest to each other at 11:00 AM, and they are 10 miles apart. $S$ is due west of $T$. They are 5 miles apart at 10:00 AM, they are 4 miles apart at 11:00 AM, they are 4 miles apart at 12:00 PM, and they are 10 miles apart. $S$ is due west of $T$. They are 5 miles apart at 10:00 AM, they are 4 miles apart at 11:00 AM, they are 4 miles apart at 12:00 PM, and they are 10 miles apart. $S$ is due west of $T$. They are 5 miles apart at 10:00 AM, they are 4 miles apart at 11:00 AM, they are 4 miles apart at 12:00 PM, and they are 10 miles apart.

3. Two ships $S$ and $T$ are steaming on straight courses, not necessarily parallel. With constant speeds, $S$ at 7:00 AM, $T$ at 8:00 AM. Have finished this test (complete)
4. Triangle $ABC$, with side lengths $AB = AC = 12$ and $BC = 10$, is inscribed in a circle. The length of $\overline{AP}$ is \( \frac{n}{m} \), where $m$ and $n$ are relatively prime positive integers. Find $m + n$. 

Answered: 0  Unanswered: 6
5. Find the number of ways in which 7776 can be expressed as a product of three positive integers. Factorizations that differ only in the order of the factors are not considered to be different.
6. Find the largest prime factor of \(33^6 - 11^6 - 19^6\).