

Euclid's division lemma :

According to Euclid's division lemma $a = bq + r$. In this equation, a and b are positive integers. To satisfy the equation we need to find a value of q and r .

Example:

Let $a = 25$ and $b = 6$. Find the value of q and r to satisfy the equation of Euclid's division lemma.

Solution:

$$a = bq + r$$

$$\Rightarrow 25 = 6q + r$$

To solve this equation, we need to divide 25 by 6. The resulting quotient and the remainder will be 4 and 1 respectively.

Replacing the value in the equation : $25 = 6 \times 4 + 1$.

Thus 4 and 1 are unique integers