

Question: While finding a quadratic equation with the given roots, Mr. Mistake took the reciprocals of the roots and got the equation of the form $x^2 - 5x + k_1 = 0$, whereas Mr. Error took the square root of the roots and got the equation of the form $x^2 - k_2x + 3 = 0$. What is the actual equation, which can be formed with the given roots?

$$x^2 + 45x + 3 = 0$$

$$x^2 - 45x + 9 = 0$$

$$x^2 - 15x + 3 = 0$$

$$x^2 + 45x - 9 = 0$$

Question: How many whole number pairs satisfy both the inequalities $2x + 3y \leq 12$ and $9x + 4y \leq 72$?

1. 10

2. 12

3. 72

4. 19

Question: If $2y - x > 2x - y$, and $0 \leq y \leq 20$, how many non-negative integer pairs of x and y satisfy the given inequalities?

1. 200

2. 210

3. 20

4. 21

Question: What is the sum of all possible values of m in the given inequality?

$(m + 2)(m + 3)/(m - 2) > 0$, m is an integer, it is known that $m \leq 99$.

1. 4950

2. 5050

3. 1032

4. 4947

Question: If equation of a line is $|x| + |y| \geq 8$ and equation of a circle is $x^2 + y^2 \leq 64$. Find the area enclosed?

Question: How many positive integer pairs (x, y) satisfy the inequality $4^{x+y} - 10(2^{x+y}) + 64 \leq 10(2^{x+y})$?

1. 1

2. 2

3. 3

4. 6