

Answer to Question#39552 - Math - Algebra

Question: $\begin{cases} x + 3y = 4; \\ 2x - 6y = 4. \end{cases}$

Find the value of x and y .

Solution. Let us express x as a function of y from the first equation:

$$x = 4 - 3y$$

We can now substitute this into the second equation:

$$2(4 - 3y) - 6y = 4$$

And find y :

$$8 - 6y - 6y = 4$$

$$-12y = -4$$

$$y = \frac{1}{3}$$

This also gives us the value of x :

$$x = 4 - 3 \cdot \frac{1}{3} = 4 - 1 = 3.$$

Thus, the solution of the given system is the pair of values $x = 3, y = \frac{1}{3}$.

Answer. $x = 3, y = \frac{1}{3}$.