Answer on Question #43699, Math, Algebra

There are some benches in a classroom If 5students sit on each bench three benches are left vacant and if 3 students sit on each bench 5 are left standing. What is the total number of students in the class?

Solution.

Quantity of students S satisfies two equalities

$$\begin{cases} S = 5(x-3) \\ S = 3X + 5 \end{cases},$$

where X is benches quantity.

From second equation we have $X = (S-5)/3.$

Put it into the first equation we obtain $S = 5\left(\frac{S-5}{3} - 3\right).$

Then the solution will be equal 35.

Answer. S = 35.